The Builder.

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The Peterborough Cathedral Question.

THE decision of the Archbishop of Canterbury as arbitrator in the contention about the treatment of Peterborough cathedral, published at length in the *Times* of Wednesday last, is a gratifying document to peruse, even in the eyes of those who, like ourselves, do not entirely concur in its conclusions. The Archbishop has in the main vindicated his claim to be regarded as a suitable arbitrator in the case; and in contrast with all the exaggerations, sentimentalities, cross questions, and crooked answers which the dispute has hitherto called forth, it is refreshing to read a document so cool, considerate, and business-like, and which takes in hand the whole case with such thoroughness and impartiality, as well as with a knowledge of the bearing of architectural and archæological considerations certainly not very often found outside the group of specialists in the study of such subjects.

The Archbishop divides his decision into two main heads: his criticism on the constitution of the committee, and that on the architectural schemes propounded. With the common-sense of a man of business, he points out that in carrying out any great work of the kind it is in the first place necessary that it is to be understood who is to have the ordering of it. The Archbishop comments, with a certain sarcastic directness of expression, on the very peculiar constitution, or want of constitution, of the committee for directing the work. "The committee," he says, "consists of fifty or more members not appointed (I understand) on any systematic scheme. The Dean and residentiary Canons are naturally *ex officio* members of it. Its decisions are by majorities of members able to attend on each occasion. The Canons claim to control every decision, and state that they have originated every proposal and formed a decision on each step (until the proposal about the tower) before it came to the committee. They have 'practically conceded a veto on every step' to the committee, but have 'not contemplated divesting themselves of any of the rights or responsibilities relative to the cathedral fabric which are inherent in the Dean and Chapter,' and 'that the committee was formed for the purpose of obtaining funds.'" When it is added that on this basis of constitution any three of the Canons acting together, as forming the majority of the residentiary Chapter, would in any difference have the entire control of the proceedings, and that, on the other hand, their contract with the builder engages him only to look to the subscription fund for remuneration, most clear-headed folk will agree with the Archbishop that such a constitution is "absolutely hopeless" for the successful execution of a great work.

Dr. Benson accordingly recommends, as the first step, the formation of a committee on a sound basis. The general committee, whose real function is to raise the fund for the work, should appoint an executive committee to control the work; and here the Archbishop suggests a means whereby the *ex officio* members may retain their *ex officio* character and yet be hindered from exercising undue power. He proposes that the Dean and four Canons should be *ex officio* members of the executive committee; that they should nominate four other members, and that the general committee should nominate eight; giving an executive committee of seventeen members, the Dean presiding. This committee should in its turn appoint a sub-committee of three, to be on the spot and watch the work constantly. The general committee would then meet once or twice a year to receive reports and decide on large operations.

Having made this recommendation, Dr. Benson, before proceeding with his judgment on the architectural side of the question, points out that should such a committee be formed it would be the duty of that committee to consider and decide upon the architectural treatment of the cathedral; and he argues that had such a committee been constituted at first the deadlock which has led to his being called in as arbitrator would never have occurred. He therefore proceeds to give his judgment on the architectural question, with the proviso that if the new committee, as recommended by him, be formed, his arbitration on the architectural question may be considered as superseded, and the matter left to be decided by the committee. If those concerned decline to take his advice and form themselves into a committee constituted on a rational basis, then they are to be bound by his decision as to the treatment of the cathedral, and the choice of the various schemes that have been proposed.

These various proposals Dr. Benson simplifies, omitting those which have been practically abandoned, into two. The one, which he distinguishes as A, is the original one, to replace everything that had been taken down exactly as it stood, only giving such strength to the re-construction as to allow of a possible addition to the lantern, in the way of an octagon stage or otherwise, at some future time. The other plan, B, Dr. Benson describes as "what remains through successive stages of a proposal for a high Norman tower to be erected (or re-erected) from the ground upon two ancient Norman arches, and two others to be substituted for the pointed arches east and west, with an upper stage of Decorated work, corresponding to the present lantern and following its main lines, but much heightened and embellished. Into the lower arcade of the tower, immediately above the great Norman arches, were to be worked the remnants which have been found of the original arcading, and the whole was, according to this proposal, to be crowned with a high spire." And these are further and more briefly summarised thus:—"I am, accordingly, to choose between A, viz., the replacement of the pointed arches of A.D. 1380 east and west of the crossing; above these the present Decorated lantern of that date, as it lately rode the four great roofs, with provision for a future superstructure, possibly an octagon, as anciently;—and B, substitution of Norman arches for pointed; above these a Norman story, 15 ft. to 18 ft. high, working in the relics, which probably formed an arcade before A.D. 1380; above this the Decorated lantern, necessarily remodelled to its new position, battlement, and high pinnacles."

The Archbishop gives his judgment for A, which includes the rebuilding of the two pointed arches of the crossing (Sir E. Beckett's "good-for-nothing arches"). This question of the pointed arches is really the turning-point of the whole matter, and a very difficult one to come to a definite conclusion about. Our own conclusion, in considering the matter a short time since,* was that on the whole it was not worth while to replace the two pointed arches now that they were down; that once down and rebuilt, their historical interest would be much impaired, and that their introduction at all by the fourteenth-century architects was a defacement of the artistic unity of the architectural centre of the building. Dr. Benson's reason for taking the opposite view we will give in his own words:—

> "In favour of abolition [of the pointed arches] it is urged that they are less 'fine and rich' than, indeed are 'poor and mean' in comparison with, the Norman. But they are allowed to be good Decorated work, so that this criticism is only to be taken as a general disparagement of the Decorated style in comparison with the Norman. Against abolition is the fact that they are the central point of the fourteenth-century remodelling of the whole church. They correspond to the west windows and internal advanced arch before it, to the groining of the choir roof, to the pointed labels so carefully inserted over every clearstory window (as well as over the side arches of the crossing), and lastly to the lantern itself, which they supported. With all these the pointed arches form one sequence. If they are abolished on principle in favour of Norman, much else ought to be abolished throughout the church as fast as opportunities occur, and probably the lantern itself."

* See *Builder*, January 10th of this year.

Of course that is the other possible way of looking at it. If you regard the pointed arches of the crossing in relation with the other Pointed work of the church, they are in place; if you regard them in relation to the crossing, which is the way every genuine *architect* (as opposed to archæologist), we should say, would regard them, they are very much out of place, and are in fact, eyesores. We naturally take the latter view; but we admit the reasonableness with which the Archbishop puts his own view.

We cannot say so much in favour of the reasons given for rebuilding the lantern just as it was before the failure of the tower. Dr. Benson appears to have made a misapprehension—singular in a document otherwise displaying such clear knowledge of the facts,—in regard to the lantern. He says "it would have to be singularly altered if suspended at a greater height. It was specially designed to ride close down upon the roofs. . . . . The blind panelling between the windows, which was so arranged as to fit down above the gable, would be without meaning when lifted a space above it." This is surely putting the cart before the horse. The arcading stage, against which the roof would naturally have abutted, was removed when the crossing was partly rebuilt, to lighten the weight on arches which had shown themselves inadequate; and the peculiar treatment of the tower was cleverly devised to make the best of disadvantageous circumstances; but it was a kind of architectural makeshift. Having now strengthened the piers so that they will carry a much greater weight, why replace a design the distinguishing feature of which was especially forced on the fourteenth-century builders by the fact of a weak substructure? There may be historical reasons for doing this, but not architectural ones, as the Archbishop seems rather to think there are.

We cannot, therefore, say that we agree with Dr. Benson's decision, and we are disposed to hope that the committee will be reconstituted as he has suggested, and that a scheme more architectural and less archæological will be carried out. At the same time we must say that the more archæological view of the question could hardly have been more ably or more moderately stated.

To give full weight to the Archbishop's views we subjoin his final summing up in his own words:—

"B has the recommendations:—

First,—Of recovering into its place the design of one of the stages of arcading, and of incorporating an existing remnant of it. This, as a mode of gaining height, is recommended by its faithfulness to the past.

Second,—And of substituting copies (with some genuine fragments) of the earlier Norman arches in places of the actual past of the last five centuries. This is recommended on the ground of preference for the style, as well as of the pursuit of superior antiquity.

But B has the following disadvantages:—That

1. As against the principle of faithfulness to the past it obliterates the mechanical effort of 1380, and the chief features of the 'Pointed' remodelling of the whole church about that time; and

2. Alters the design and adaptation of the lantern to its place.

3. That it leaves a large space between the arcade and lantern, to be either a blank or to be used to introduce a novel and most prominent addition.

(4) That it presents an assemblage of features never before in juxtaposition; partly copied and partly old, the old altered in some characteristic points (lantern) to enable them to be fitted together, and the oldest portion appearing between the newest and that which belongs to the middle period.

The disadvantages of B seem to me rather to outweigh its advantages, and, balancing merits and demerits in the two plans (which is all that I have to do), I cannot but recommend

That the first plan A be adhered to as originally intended and provided for, viz., of replacing in solid and durable work the form of the tower and arches which we received, providing at the same time what may be necessary as preliminary as to heightening the tower, whether by octagon or otherwise.

And that the recovered fragments be fitted together (as well as they can) in some place where they may illustrate the antiquities of the church."

The argument as to the intermingling of styles of various dates in what would be essentially a modern erection deserves serious consideration. But our general summary of the matter is, as before, that the tower as it recently stood was a poor concern, and that Mr. Pearson is a nineteenth-century architect capable, if he has a fair chance, of producing something better.

THE HISTORY OF FREEMASONRY.

BY WYATT PAPWORTH.

THE third volume of Mr. Gould's exhaustive History,* which has now appeared, continues an investigation into "Early British Freemasonry in England." The details of the four chapters comprise,—Masonic Tradition, Sir Christopher Wren, Papal Bulls, Travelling Bodies, Annual Assemblies, the Cabbala, Mysticism, the Rosicrucians, Elias Ashmole, the Masons' Company, Plot, Randle Holme, the Old Charges, the Legend of the Craft, Light and Darkness, Gothic Traditions, Degrees, and Speculative Masonry. Testimony has already been borne to the great labour and research displayed by the author of this entirely new history of Freemasonry, culled as it partly is from all sources, ancient and modern, with much warm-hearted assistance from some few friends equally zealous with himself in searching for the truth connected with a series of events which have puzzled all investigators. Among the very numerous subjects, and points connected with them, and thoroughly investigated in this volume by Mr. Gould, there are two of much interest to architects. 1. The negation of the hitherto received assertion that Sir Christopher Wren belonged to the Society of Freemasons. 2. The hitherto unknown contemporaneous existence of the Guild of Masons in London and of the Society of Freemasons; while, partly arising out of the latter, is the query,—Did the older copies of the "Old Charges" now collected belong to the former or to the latter body? Discussing the merits of Ashmole's diary, our author conceives that the Sloane copy was in 1646 in use by an operative and speculative body, and adds that "we are still in doubt as to what period above 1646 a monopoly, if any, of these ancient documents by the working masons can be viewed as probable." Further on Mr. Gould admits, from the words used by Randle Holme, that "there were then [1688] subsisting unions of practical Masons, in which there was no admixture of the speculative element." Throughout this review the two bodies will be distinguished by "Guild" and "Society," which latter, in an opinion formed by myself after very many years' researches out of the "old records" of the Society (the results of which were published in 1863, and have been largely referred to by Mr. Gould with kindly acknowledgements) much resembles the Hermit Crab, which quietly ensconces itself in the empty shell it finds convenient for its residence. In a previous review of this work it was pointed out that this "History" would be equally available in a "History of Architecture," and future writers upon it, treating of this period, will no doubt avail themselves of the treasures contained in these volumes.

In commencing chapter xiii. our author writes: "It is, I think, abundantly clear that the Masonic body had its first origin in the trade unions of mediæval operatives. At the Reformation these unions, having lost their *raison d'être*, naturally dissolved, except some few scattered through the country, and these vegetated in obscurity for a period of close upon two centuries, until we find them re-organised and taking a new *point de départ* about the year 1717. But by this time the Masonic bodies appear under a new guise. While still retaining, as was natural, many forms, ceremonies, and words which they derived from their direct ancestors, the working masons, yet we find that operative masonry was, and probably long had been, in a state of decay, and a new form, that of speculative masonry, had been substituted in its place." As this word "speculative" has been used, I shall prefer to notice Mr. Gould's elucidation of it, contained in the closing pages of the volume. "It is," he writes, "a word the import of which has been but imperfectly grasped by members of the craft." It is used as contradistinguished from "operative or practical masonry." But, I would suggest, may it not have been introduced to cover the practice of admitting lay brethren into the local lodge or town guild of operative masons? The author has amusingly referred to a MS. constitution or charge (No. 2 in his list of some fifty others as now collected), wherein it is stated that "Edwin, the youngest son of King Athelstan, learned 'practical' masonry in *addition* to 'speculative' masonry, for of that he was a master," which passage is held to mean that "this 'speculative' was a knowledge of geometry," that the writer of the book did not consider *speculative* knowledge as making the possessor a mason, for he writes, "and became a mason himself," *i.e.*, when he had added the *practice* of that science to his speculative. He was, clearly, not a mason when only in possession of the speculative science." How many of the members of the present society, it may be asked, are qualified as masons under this explanation? It should be added that the manuscript from which the above is quoted is fairly supposed to have been written in the early part of the fifteenth century. Our author gives up several pages to a careful consideration of the date of this and the earlier (or Halliwell) MSS., assisted by the learned authorities in the British Museum and elsewhere.

The word "speculative" was in use in 1582, 1570, 1530, 1643, 1538, and later, as 1658, 1704, 1738, &c., as shown by the extracts and titles of several printed publications quoted at the end of this third volume. It is also important to notice our author's statement that "in England *none* of the *speculative* or non-operative members of the craft . . . . in the seventeenth century were received as apprentices. All appear . . . . to have been simply *made* Masons or Freemasons." Then, to what other body could the two earliest, and perhaps also some later, Charges have applied, except to a working Lodge of operative Masons, where the three degrees undoubtedly existed on their own showing? Mr. Gould quotes the two passages in the poem (2) relating to the apprentice; and Ashmole, on his own showing was made a Mason in the form prescribed by the Old Charges, possibly (as pointed out by Mr. Gould) the copy made by Edward Sankey (No. 13 in Mr. Gould's list) having been read over to him, and his assent given in the customary manner. "Freemasons and Freemasonry, more or less speculative, existed certainly in Scotland, and inferentially in England . . . . and if we cannot distinctly trace it back to a higher origin than the sixteenth century, it is only to be inferred that *proofs* of a more remote antiquity may be yet forthcoming." Mr. Gould also states,—"In my opinion, however, Masonry in its general and widest sense,—herein comprising everything partaking of an operative as well as of a speculative character,—must have been at a very low ebb about the period of Moray's death (1673), and for some few years afterwards."

"The road to truth, particularly to subjects connected with antiquity, is generally choked with fable and error, which we must remove by application and perseverance before we can promise to ourselves any satisfaction in our progress." This our author quotes from Dalcho, "Masonic Orations," ii., p. 37, and he has acted on the advice. This is a sort of apology for his investigation of the common belief that the celebrated architect, Sir Christopher Wren, was a member of the Society of Freemasons, an assertion which appears to rest upon two sources of authority; first, an obscure passage in Aubrey's "Natural History of Wiltshire," and, secondly, statements in Dr. Anderson's "Constitutions" of 1738. These our author considers are quite irreconcileable with the

* The History of Freemasonry: its Antiquities, Symbols, Constitutions, Customs, &c., derived from Official Sources. By Robert Freke Gould, barrister-at-law, Past Senior Grand Deacon of England. 4to. London: Thomas C. Jack. 1884. Vol. iii., 248 pages. The first of the previous volumes was reviewed in this journal in the number for the 3rd of March, 1883, p. 266, and the second in that for the 14th of July, p. 37, and the 28th of July, p. 102, of the same year.

statements in Anderson's earlier publication of 1723. Aubrey's "History" was written and added to between 1656 and 1691, but only first printed in 1847, under the editorship of John Britton, F.S.A. The extraordinarily minute investigations by Mr. Gould to try and arrive at the truth of the statements and legend, may be very satisfactory to the author, but Masonic writers must be in despair at the result. In some forty pages devoted to the inquiry, we find the following statements :—

"From neither of the extracts from the *Parentalia* are we justified in drawing an inference that Wren was a Freemason" (p. 15). "The fable of Wren's Grand Mastership I shall not further discuss . . . it being sufficiently apparent,—as tradition can never be alleged for an absolute impossibility,—that he could not have enjoyed in the seventeenth century a title which was only created in the second decade of the eighteenth (1717)" (p. 43). "Assuming Wren to have been a Freemason at all,—and in my opinion the evidence points in quite another direction,—he would have had much difficulty in neglecting an office which, at the time named, did not exist!" (p. 49). "The belief that Wren was adopted a Freemason in 1691 [is] at once improbable and ill attested [and] must fall to the ground" (p. 52). Lastly (p. 55), "The popular belief that Wren was a Freemason, though hitherto unchallenged, and supported by a great weight of authority, is, in my judgment, unsustained by any basis of well-attested fact. The admission of the great architect,—at any period of his life,—into the Masonic fraternity, seems to me a mere figment of the imagination, but it may at least be confidently asserted that it cannot be proved to be a reality."

Such statements and strong opinions, founded on a most careful inquiry, require no comments at the hands of the reviewer, who, however, takes exception to the remark that the belief, as above stated, has been hitherto unchallenged; for, on reference to the Masonic journals of about twenty years since, it will no doubt be found that inquiries were made at that time on this subject, but without any practical result. However, so difficult is it to kill a legend when obtained from "old records," that Mr. Gould may rest assured that popular writers will continue to transmit the hitherto received statements down to the latest posterity, assisted by the present inscription on a silver plate let into the head of "the historic mallet employed to lay the foundation-stone of St. Paul's," and now belonging to the Lodge of Antiquity, which we are assured by Mr. Gould (p. 47), "presents no less than six misstatements." It will be found in full in *Notes and Queries*, 3rd ser., viii., 6, having been contributed by our old friend "A. A."

There appears to have been also a "muddle" as to the names of the members of the "Strong" family. The *Constitutions* of 1738 state that Wren's *wardens!* at work at St. Paul's Cathedral were Edward Strong, senior and junior. As the first "Edward" was only 22 years of age in 1673, neither he nor his son could have assisted at "levelling the foot-stone" in that year. "Thomas" appears to have been the mason who was succeeded at the works by his brother "Edward" senior, who claims to have laid the last stone of the lanthorn, on October 25, 1708, whereas Christopher Wren (the son) also claims the honour of having laid the "highest or last stone" in 1710. It will further disappoint those relying on the "old records" to learn that neither Thomas nor Edward was a member of the Society of Freemasons, although it is now assumed that they did belong to the Company of Masons. That Inigo Jones may possibly have belonged to some body,—of Masons or Freemasons,—has been established by the recovery of his copy of the Constitutions or Charges, which is dated 1607, and has in it a drawing signed by himself; it is now in the possession of Rev. A. F. Woodford, of London. Any one, however, knowing how greatly Jones was interested in antiquities (in that year he was 34 years of age, and engaged on the Masques at the Court of James I.), might assume that he may have had this copy made out of sympathy with the subject,—as any one might do in the present day, were they not printed, and thus easily accessible.

In respect of the tradition of "travelling bodies of Freemasons," which appears to have been first mentioned in 1686, our author cites, for the first time, a very curious confirmation of an English craft guild by Pope Lucius III. (1181-85), whose privileges had been already confirmed by the English King Henry II. It was Sir William Dugdale who told Aubrey that about "Henry III.'s time the Pope gave a bull or diploma (patent) to a company of Italian architects to travel up and down over all Europe to build churches." Our author considers that "a solution of the problem must be looked for in the history of Italy," or "that in the annals of that period (*temp.* Henry III.) of English history will be found a clue to the explanation of which we are in search." The era (1216 - 72) of Henry III. is, he states, "especially memorable as a period when the ascendancy of the Pope was at its zenith in these islands,—that Henry was the first monarch of England who paid attention to the arts, and to his munificence are ascribed the most beautiful works of the Mediæval age which we posses,—and, if we consider the partiality of Henry III. for foreigners, the constant communication with Rome, and that so large a portion of the English benefices were held at that period by Italians, it may fairly be assumed that these circumstances must have materially influenced the employment in England of the artists of southern Europe." Such a paragraph as this requires further consideration. No facts are given as to the employment in England of foreign artists, and though a few instances occur to the reviewer of such employment, such as those mentioned by Walpole, namely, Odo and his son Fitzodo, goldsmiths, &c.; Masters William and Walter, painters; and Pietro Cavallini, sculptor, I doubt if any of our historians would agree that the architecture of the period was at all affected by the employment of any foreign artificers. Our author then considers the establishment of the two Orders of Mendicants,—the Dominicans, 1215, and the Franciscans, 1210, confined 1274 with the Carmelites and the Augustinians,—all comprising the Friars, in contradistinction to the Benedictine Monks and the Augustine Canons. "These friars travelled wherever they pleased, instructed the people, gathered riches, taught and practised art,—they became possessed of ample buildings and princely houses." Are we to begin to assume that the larger number of edifices of the English Gothic are from the hands of foreign artists? The Abbé Bourassé is quoted as stating that the architects of the Dominicans followed one style and those of the Franciscans adopted another; that these styles are not specified, and that as the Franciscans had not architects of their own body they must either have availed themselves of exterior talent or had recourse to some member of the rival brotherhood. This last is hardly probable, judging from the jealousies existing among such bodies. "These friars," writes our author, "were Italians,—among them were many architects,—commingled with French, Germans, Flemings, and others. They procured Papal Bulls; they travelled all over Europe and built churches; their government was regular . . . . and a General governed in chief . . . ." as recorded in the *Parentalia*, and so stated by Dugdale and Ashmole! But the term "Freemasons" was not then known, for the very earliest uses of the term yet found are in 1376-7 and 1396, as is hereafter further noticed.

Having discussed the legendary "Grand Masters" and the "travelling bodies," we are taken to the "general or annual assemblies," mentioned in the old Charges; one assembly, it has often been stated, but on no good authority, was attempted to be put down by Queen Elizabeth in 1561. These Charges mention that the member is to attend, if he knows where the meeting is to be held, and if he be within five, ten, or fifty miles of the place. The annual assembly of a lodge of Masons was evidently a movable one,—due, in my opinion, to the locality of, and to the numbers in, the local body,—for the brother Mason might be at work at a distance, and in a place away from the usual line of traffic, by means of which he might only be able to obtain information! The author's amusing description of Mediæval "legend making" need only here be adverted to.

"At what time the oral traditions of the Freemasons began to be reduced to writing, it is impossible even approximately to determine," . . . . nor "the period when they were moulded into a continuous narrative. . . . . The curiosity of the early Freemasons would naturally be excited about the origin of the society. Explanatory legends would be forthcoming, and, in confounding as they did, architecture, geometry, and Freemasonry, Dr. Mackey considers that 'the workmen of the Middle Ages were but obeying a natural instinct which leads every man to seek to elevate the character of his profession, and to give it an authentic claim to antiquity'" (p. 58).

A portion of chapter xiii. relates to Elias Ashmole. A very careful investigation into his history; his initiation as a Freemason at Warrington in 1646; and his attendance at an admission at Masons' Hall in 1682, leads to the declaration that "whilst he [Ashmole] is stated to have regarded his admission as a great distinction, there is no direct proof that he was present at more than these two Masonic meetings in his life." He died May 18, 1692, in the seventy-sixth year of his age. This supposed abstention from the brethren has puzzled many of the critics; but Mr. Gould, after a careful scrutiny of Ashmole's diary, arrives at the conclusion that "it is probable that he did in some way keep up his connexion with the Freemasons, but that it was of such a slender character as not to merit any special mention. . . . . His diary scarcely gives details on any point except his ailments and his lawsuits, but he would probably have made at least notices of his having attended Lodges, had he done so with any frequency, as he does of having attended astrologers' feasts. . . . ." "My own view [writes Mr. Gould], therefore, is that the Ashmolean influence on Freemasonry, of which so much has been said, is not proved to have had any foundation in fact, although it is fair to state that I base this opinion on circumstantial evidence alone, which is always liable to be overthrown by apparently the most trifling discovery. . . . . There is no trace, as far as any remaining evidence is concerned, that the Freemasons were in any way connected with any" [of the societies he names], "but, on the contrary, that, although they [the Freemasons] had probably in a great measure ceased to be entirely operatives, they had not amalgamated with any one of the supposed Rosicrucian or Hermetic fraternities, — of the actual existence of which there is proof,—still less that they were their actual descendants, or themselves under another name. To assume this, indeed, would be to falsify the whole of authentic Masonic history, together with the admittedly genuine documents upon which it rests."*

A NATIONAL LAND COMPANY.

NEW undertakings have ever been introduced to the public with a more imposing array of names than that which is associated with the proposed land company, whose title is yet to be determined. It is not often that Lord Carnarvon and Mr. Joseph Cowen, M.P., Professor Bryce and Mr. Ernest Noel, the Earl of Egmont and Mr. Burt, are to be found upon the same platform, and it may be regarded as a sign of the times that the subject to be discussed at Willis's Rooms, on Friday, is one in which great landowners like the Dukes of Argyll and Westminster, the Marquis of Northampton, and Earl Cowper; capitalists like Sir John Lubbock and Mr. Walter Morrison; and lawyers like Mr. Horace Davey and Mr. Westlake, appear to take an equal interest, though it is to be hoped they will not all take an equally active part in the proceedings.

The scheme, as shadowed out in the prospectus that has been privately circulated, is definite in its purpose and perfectly intelligible. It aims at increasing the number of landowners (in England) by offering facilities for acquiring agricultural land in small quantities,—in other words, for resuscitating and enlarging the class of yeomen which, from a variety of causes, has almost

* To be continued.

become extinct among us. Granted that it be desirable that we should have a larger number of small freeholders, the questions that follow are, necessarily, whence and how are we to obtain them? The promoters of the company (which it is scarcely needful to say is both commercial and philanthropic) expect to draw their recruits from five distinct sources.

First, the *labourers* who may desire to purchase land either for the purpose of cultivation or for the erection of cottages for their own occupation, will be assisted. But by cultivation is to be understood not so much spade-husbandry, which under present circumstances does not promise much success, but dairy-farming upon a limited scale and cultivation by horse-labour,—the latter requiring a certain number of co-operative, or, at any rate, contiguous, labourers, in order to make it worth the while of any man to keep horses for their accommodation. The holdings would be from one to four acres in extent, and would not demand from their owners more work than could be given after hours, and with an occasional day or half-day at harvest times. As to cottage building, the company might itself undertake this work, or advance a certain sum in the shape of building materials, leaving the purchaser to find the labour.

2. *Small Farmers.*—Here, a certain amount of capital might be presumed to exist, and offers might be made of holdings varying in extent from 12 to 30 acres, a certain deposit being paid per acre before entering on occupation.

3. *Tradesmen.*—These would occupy a certain number of frontages on the main road, and, besides attending to their shops, would be glad to cultivate or employ for pasture an acre or two of land.

4. *Market Gardeners.*—Their holdings would necessarily depend upon the locality, and with them spade labour would be the rule.

5. *Immigrants from large Towns.*—"There is," says the prospectus, "a certain number of men in the large towns, who, having saved some money, wish to retire to country life, occupying themselves with gardening, bee-keeping, poultry-breeding, &c. Besides these it is probable that a proportion of those who now emigrate would, if land could be acquired on easy terms, attempt the experiment of home immigration. Should that take place, which is very desirable, some failures must be expected."

It is not proposed that the holders of the land should necessarily be, from the commencement, its purchasers. In some cases,—especially with the labourers,—it might be safer to hire with the right of pre-emption. But supposing the holder desires to become a proprietor, how is he, without any capital, to do so? The company offers to let him liquidate the cost of purchase either (1) by spreading it over a term of years with annual interest calculated upon the amount of principal still outstanding; or (2) by making the usual rent a perpetual payment. In this latter case there must be buildings erected by the purchaser as a security that the land shall not be returned on the hands of the company. Under any circumstances the holder would be at liberty to sell his holding, subject to any claims which the company might have upon it.

Where possible, the company would be willing to offer a suitable extent of land for co-operative farming upon the same terms of repayment as in the case of individual purchasers.

The funds of the company would, in the first instance, be furnished by the capital arising from the issue of shares. These would be of two sorts,—one limited to 5*s.*, having priority and intended for labourers and workmen, whose active interest in the undertaking essential to its success. These shares would pay not more than 3½ per cent. The other shares, purchasable by the public generally, would be limited to 1*l.* in amount, and would pay not more than 4 per cent. Shares might be taken in part payment for land purchased.

Such is a brief outline of the undertaking which is about to be launched, and one cannot but wish it success. At the same time, certain obvious criticisms present themselves to our minds, and, no doubt, will be offered in the course of discussion. Is it necessary, it may be asked, to start a limited liability company to effect objects which our great landowners might do for themselves? If the law of entail forbids them to part with land for such purposes as are here contemplated, there could be no difficulty,—in fact, every facility would be given,—in altering the law.

Next, we cannot but feel considerable doubt whether it is wise to let labourers build cottages for themselves. Efforts are being made to improve cottage accommodation, but, as a rule, labourers themselves are indifferent or even adverse to these improvements; and, if a better cottage costs, as must be the case, more money, and that money is to come, sooner or later, from the labourer's own pocket, can we hope that it will be so expended? Again, there is no class of men in the agricultural community which works harder for bare sustenance than the class of small farmers. Unless, therefore, the terms of the Company are exceptionally easy (and then what becomes of the 3½ per cent. and 4 per cent. on the shares?) it is difficult to see how they could possibly repay principal and interest, not merely upon the cost of the land but on that of the necessary house and farm buildings. Their annual payments must exceed the rent they now pay, and if it be (and, from personal knowledge we know it often is) a hard struggle to earn this, from what source can they hope to get the larger sum which will hereafter be due from them? These, and other considerations, make one at present hesitate to give cordial support to a scheme which, in its object, is unquestionably a good and useful one. It seems to need careful revision by thoroughly practical experts.

NOTES.

MR. RUSKIN'S retirement from the Slade Professorship at Oxford is an event which will be variously estimated, according as preference is given to genius and eloquence, or to sound and commonsense views upon the function and the history of art. Mr. Ruskin's recent lectures have been as remarkable for brilliancy and paradox as any of his earlier or later utterances. But even genius cannot entirely reconcile one to the constant utterance of brilliant paradoxes, and the substitution of fancies for facts, in one of our most important centres of higher education. It will be difficult, if not impossible, to find a successor who will interest audiences as Mr. Ruskin can interest them. It may be quite possible to find a safer and more judicious guide.

THE case of Hogg *v.* Brooks, which has recently been published in the Law Reports, is worth a passing notice, as it shows a difficulty which may arise in the relationship between landlord and tenant. The tenant in the present case held under a lease for twenty-one years, in which there was a clause that it should be lawful for the landlord to put an end to the lease at certain dates "by delivering to the tenant, his executors, administrators, or assigns, six calendar months' notice in writing" of his intention to do so. The tenant, during the continuance of the term, mortgaged the premises by means of a *sub-lease* to a solicitor, who let them, and who duly paid the rent named by his tenant to the plaintiff. Subsequently, the plaintiff, or rather his assignee (but the effect is the same), desired to discontinue the tenancy, and proceeded to put an end to it in the manner stated in the lease. But the original tenant had disappeared, and consequently the plaintiff served the written notice upon his relations, upon the solicitor, upon the sub-tenant, and upon every one in fact except the necessary person. Not succeeding in thus getting possession, he commenced an action of ejectment, but in this was defeated, since it was held that by the terms of the lease the notice must be delivered to the original tenant. So the landlord did not get his property, but only the trouble of paying the cost of a lawsuit. The moral of the case seems to be that a lease should always contain the word "sub-lessee" in the proviso we have quoted above in order to enable the landlord to get the benefit of the proviso under all circumstances.

MR. WYKE BAYLISS and other correspondents have recently drawn attention in our columns to the way in which the eastern approach to the new street from Bloomsbury to Regent Circus is rendered both awkward and ugly by the retention of a public-house which ought to have been removed. Another and equally striking instance of the manner in which the local "authorities" (if such they can be called) allow modern street improvements to be spoiled is to be seen at Holborn Circus, at the corner of Hatton-garden, where a new building has recently been erected for a firm of woollen-drapers. Those who are familiar with Holborn Circus know how much traffic, both pedestrian and vehicular, converges there. For the latter kind of traffic, the wide roads and spacious circus afford plenty of room; while "verge enough" is provided for pedestrians, except at the corner to which we are now referring. The building at the south-west corner of Hatton-garden was the only one abutting on the circus which was allowed to remain without rebuilding at the time the Viaduct improvement was carried out, and the sharp angle of the old building jutted out unpleasantly and awkwardly, trenching upon the footpath of the north-west "quadrant" of the circus to within 4 ft. or 5 ft. of the edge of the kerb, the other part of the pavement being 8 ft. or 10 ft. wide. In the new buildings which face the other quadrants or segments of the circus, the angle-*façades* have been canted or curved so as to secure the *alignement* of the buildings with the sweep of the circus, and it was only reasonable to suppose that when the old building at the corner of Hatton-garden was pulled down, the new building to take its place would be set back at the angle so as to prevent, not merely unsightliness of appearance, but inconvenience and danger to pedestrians. But so reasonable a supposition was entertained without giving due weight to the idiosyncrasies and inscrutable ways of our local "authorities," and a new building has arisen on the site of the old one without opportunity being taken to effect an improvement not only desirable but absolutely necessary. The corner in question is just outside the City boundary, but surely the Holborn District Board of Works or the Metropolitan Board of Works ought to have stepped in to rectify the line of frontage? As it is, the awkward effect produced is only exceeded by the danger and discomfort to pedestrians which must result from reducing a footpath 8 ft. wide to 4 ft. 6 in. or 5 ft., especially as the contraction occurs at the angle. The thing only needs to be seen to be condemned.

A CONFERENCE will be held in Brussels during the month of June to discuss the question of canal navigation, and the advisability of extending it very considerably throughout the country. Belgium is not the only country which feels that a mistake has been committed in allowing the railway interest to obtain a complete monopoly of the carrying trade. France has for some time past been engaged on the same subject, and the importance with which canals are viewed by French statesmen may be gathered from the fact that, by the Freycinet scheme, 713 millions of francs are to be laid out immediately in developing or improving the existing canal system. It would be a very good thing if the freighters of this country would wake up to a sense of the enormous injury that has been done to English traders by the utter neglect of the canals, which have been so swamped by the railways that they are practically useless. The majority of them have been bought up by the great competing companies, who prefer to see their waterways comparatively idle, in preference to offering the traders a choice of routes, or their acceptance of a lower rate of charge. A more short-sighted policy could not well have been devised. There is enough traffic in the land

to feed both railways and canals; and the offering of facilities by the latter for sending heavy merchandise, in the delivery of which there is no occasion for speed, would stimulate all kinds of trades in a marvellous fashion. If more speed were required than the old-fashioned canal boat can give, it would be perfectly feasible to use steam traction; and we venture to think that the construction of a few good, independent, trunk waterways would form a by no means bad investment, either for capitalist or country.

TANAGRA terra cottas are, among the remains antiquity has left us, distinctly the most popular,—we might say, fashionable. Their artistic beauty is fully, and, we think, more than adequately, prized. This being the case Monsieur B. Haussoullier's book on the Tanagra necropolis* should have a wide interest. He has carefully, in the first part, classified the various kinds of funeral monuments, cippi, and stelæ, that are found at Tanagra, and is thus able to single out local peculiarities. By careful study on the spot he has obtained from the present inhabitants information as to the position *in situ* of stelæ now removed. One interesting fact he brings out is that the stele in its earliest form was really a primitive altar, its inscription intended rather for the service of the dead than the living. This is only another proof, if one were needed, of the religious, or, we might say, ritual, beginnings of Greek art. The second part of the book deals with the forms of the grave. Here, it appears, chronological classification is impossible, as all the various forms appear contemporaneously. The third, and by far the least satisfactory part of the book, deals with the contents of the grave. M. Haussoullier has not the thorough practical knowledge of vases and vase decorations which alone could see him safely through this portion of the subject. The book is illustrated by seven plates, and, taken as a whole, is a valuable contribution to a subject but little investigated.

MORE railway amalgamation is being talked of. The shareholders of the Brighton and South Coast, South-Eastern, and Chatham lines think they can foresee improved dividends resulting from a fusion of those systems, and at a meeting of the Railway Shareholders' Association held last week a resolution was passed expressing the opinion of the meeting that such amalgamation, — or a working agreement,—was most desirable. This was an amendment to the original motion (which was very indefinite), and was carried unanimously. The shareholders consider that the three systems are serving the South of London district in an unnecessarily expensive manner, comparing the position of the three lines jointly with the Great Western. Their expenses bear a much larger proportion to the gross receipts than do those of the company named, though the receipts are lower. The scheme seems feasible enough so far, but the question is, will the public be allowed to participate in the benefit? Their receipts are chiefly derivable from passenger traffic, whilst the goods traffic forms the largest item in those of the Great Western; and in our opinion competition,—while often an evil with regard to merchandise traffic,—is a guarantee that the public interest will be studied both in the running and equipment of passenger trains. In the event of this somewhat visionary scheme being carried out, will increased dividends be accompanied by increased facilities, or the reverse? We are not prepared to express approval of the proposed amalgamation whilst this remains a questionable point.

IT seems a matter of regret that the statue of Hermes carrying the infant Dionysos in the Boboli Gardens at Florence should be left exposed to the chances of weather or the malice of the casual passer-by. The statue is finely placed, about a quarter of the way up the great avenue of pines. But, though it is seen there to great advantage, it would be better safely housed in a museum. The Boboli Gardens are every Sunday the resort not only of the tourist but of the Florentine "'Arry," whose views on art are probably much the same as those of his British contemporary. Already one little foot of the child Dionysos is broken away. The claim of the statue to the care of archæologists rests on the fact that it is in general type the same as the famous statue of Praxiteles, with, however, certain differences, which have led to the general opinion that it is a copy rather of the work of the father of Praxiteles than of Praxiteles himself. In the Boboli statue the child rests on the right *hand*, instead of, as in the Olympia statue, on the left *arm*. The child is treated with much more knowledge of babyhood, but this, of course, is due to the Roman copyist. The figure of Hermes, on the other hand, is much squarer and more Polycleitean in type; it is, in fact, in conception, though not in execution, of just the sort that we might have expected from the generation that stood between Polycleitos and Praxiteles. It is noticeable that in the Boboli as in the Praxitelean group, Hermes looks away from the child in total unconcern.

A RECENT controversy between Sir E. Beckett and Mr. William White has given prominence to the subject of preserving wood or timber by the application of arsenic, and, although it may not be generally known, it is opening up a very old and obsolete question. Mr. William Chapman, who published the results of his experiments in 1817 under the title of "Preservation of Timber from Premature Decay," proved that arsenic afforded no protection against dry rot whatever. So conclusive were his proofs that in the latest work on the subject, "A Treatise on Dry Rot in Timber," by T. G. Britton, late surveyor to the Metropolitan Board of Works" (London: E. & F. N. Spon, 1875), the subject of arsenic as a preservative scarcely finds a place. It is noticed as being detrimental to vegetation; but, in the case of arsenical ores being removed from ground in Cornwall, where they have been stored, vegetation has followed in two or three years afterwards, which proves that it is not effective, unless the mineral is always present. There is nothing in its qualities as a preservative of timber that would warrant its introduction into buildings.

NOTES IN SPAIN, ARCHITECTURAL AND HISTORICAL.

I.—CATHEDRAL AND ALCÁZAR OF SEGOVIA.

ACCORDING to Colmenares, Tubal colonised Spain, Hercules founded Segovia, and Hispan built *el puente*, "the bridge," as the aqueduct is popularly called. However this may be, it is a fact that among the ancient cities of Spain, of which the origin is so frequently lost in obscurity, Segovia is one of the most interesting. The city proper is located upon a natural fortress formed by perpendicular walls of rock rising out of the valleys around to the height of about 100 ft., and the natural strength of such a site was completed by the picturesque walls, with square and round towers, with which some 800 years ago King Alfonso VI. surrounded it. The shield of the city bears "the bridge," with the head of one of Pompey's sons looking over it.

According to the late Mr. Ford, the name of the city and its foundation are Iberian. Its monuments, ancient and Mediæval, are of the highest interest; and at every turn of its narrow intricate streets you come across some memento of the past. From many different points outside, there are exceedingly picturesque and striking views of the ancient walls, towers, and gateways of the Alcázar perched upon its promontory rock, and frowning above the precipices below; of the domed towers of the cathedral rising above all its surroundings; or, finally, of the grand old aqueduct, compared with which all the rest of the picture seems to be mere background.

The Cathedral.

One especial interest in connexion with the Cathedral of Segovia consists in the fact that it was one of the last, if not the very last, erected in Europe in the Gothic style. While the glories of that style were being elsewhere despised and forgotten in the rage for the revival of the antique, Gil and Rodrigo de Outañon, father and son, worked steadily on in the paths of their predecessors, leaving to posterity a splendid monument in the Christian style of the Middle Ages. It was begun by the father in 1525, and continued by the son, who died in 1577.

Our illustration of the cathedral is taken from the Plaza Mayor. It shows the eastern portion of the building, comprising a choir in the centre, with circular aisle or ambulatory, outside of which are the several apsidal chapels. Although it seems that the general plan and many details are similar to those of the late Gothic cathedral of Salamanca, of which the Outañons were also the architects, the round apse is a variation. In the centre is the chief dome, and beyond, a single western tower, both which in the general view accord fairly enough with the rest of the edifice. The worst fault of the tower is the want of an intelligible finial, the lightning-conductor being far from an artistic finish. It seems that the original Gothic spire was destroyed by lightning early in the seventeenth century, so that the actual summit is of that time.

The right of our illustration shows some of the old houses of the Plaza, underneath which are portales, or porticos of lintel architecture set on square columns, which afford shelter against snow and rain in winter, as well as shade in summer. There are balconies for every floor, supported on long projecting corbels. On the opposite side to the cathedral is the old Church of San Miguel, which has preserved its Romanesque campanile, and its original Gothic plan of nave, transepts, and aisle chapels.

As far as parapet and pinnacles the tower is Gothic, and the Perpendicular outlines are plainly marked, instead of being lost, as in many buildings late in that style, in a mass of details. The seventeenth-century addition consists of a turret, forming an octagonal drum, set in the centre of the Perpendicular tower, this first stage terminating with balustrade and ball, in place of the Gothic finial. This turret is domed, and terminates with a lantern ending in a blunt and emphatically pointless finial. The faces of the Gothic tower are panelled, though the heads of the panels are round. The lantern of the central dome is likewise of Renaissance character, having square-headed windows. However, as before said, the Renaissance character of these details is not so strongly marked as to destroy the generally fine effect of this, the last grand Mediæval cathedral.

The interior fully confirms the opinion here put down as to exterior. The height of nave, aisles, and dome, and the extent in other senses, appear to the eye all on a grand scale; and the actual figures bear out this estimate. The actual dimensions given by Madoz are these:—The nave rises to 120 ft., the aisles to 80 ft., the central dome outside to 250 ft., and the tower to 350 ft.; total length of the ground plan, 420 ft., width, 210 ft., and each side of the tower, 33 ft. Not merely in dimension, but likewise in style, is this cathedral very fine, especially if we bear in mind the century in which it was planned.

The stained glass is really very fine, especially the ruby, emerald, and sapphire; it looks like an excellent specimen of what Winston calls the Mosaic Enamel Style. The date 1544 appears in two windows on the north side. There is quite sufficient in this glass for a study by itself. The subjects are from the Old and New Testaments, apparently arranged as in earlier windows, and in works like the *Biblia Pauperum* and *Speculum Salvationis*, in groups of types and antitype, one window containing the Crucifixion along with one of its types, the Brazen Serpent. Like the cathedral itself, the glass is evidently not all of the same date. The earlier windows, and more mosaic in style, are those towards the west end of the aisles and clearstory. Those towards the east end present a later, broader, more enamelled, and more pictorial character.

The choir,—in the centre, as usual in Spain, at least from the sixteenth century downwards,—presents the usual carved stalls. These are beautifully wrought in the Gothic style, though surmounted by a later balustrade. The ironwork (*verja* or *reja*) inclosing the Capilla Mayor and the choir presents foliage and flowers finely wrought, and, though later than the building,

* "Quomodo Sepulcra Tanagræi decoraverint." Parisiis: 1884. B. Haussoullier.

it accords well enough with its Gothic surroundings. The cloisters belonged to the older cathedral, which was situated nearer the Alcázar than the actual one, and dated from the twelfth and fifteenth centuries. They were taken down and put up again by Juan Campero in 1524. Geometric forms appear in the window tracery, very similar to those observed in the stucco decorations of the Alcázar. The retable of the high altar is of beautiful marble, and presents to view the patrons of the city,—the B. V. M. and Child, San Hierotes, the first bishop of the see, and San Frutos, a hermit.

The history of the construction of the cathedral is not without interest. It was in 1510 that the removal from its original site was determined on, but on account of the events of the time, such as the death of Ferdinand the Catholic, in 1516, and the accession of Charles V., it was only begun in 1525. Once begun, the bishop, clergy, and people worked away with a hearty good-will, night and day, working days, and holidays, so that by 1558 sufficient was completed for Divine worship. It was finally completed in 1620, and only consecrated in 1768.

The Alcázar.

The keep of this ancient castle and royal citadel, shown in our illustration, is a lofty tower, the walls adorned with stucco in the Moorish style, and crowned by a parapet set out on corbels, and formerly with twelve salient circular turrets, or bartizans, two at each angle and two between the east and west respectively. Its present appearance shows but a wreck of what it was before the fire of 1862. The castle is admirably placed on a precipitous rock, rising abruptly several feet between two rivers, the Eresma to the north, and the noisy Clamores to the south, which unite at the foot of the cliff. The position of this royal castle on a promontory-rock, between defending streams, has been compared to a ship's prow dominating the waters' meet below, and it must have been in former days well-nigh impregnable. The city walls continue eastwards on either hand, and, to this day, the more ancient aqueduct brings water to the castle. The breadth of the rock at the entrance to the open plateau in front of the Alcázar, now an Alameda and parade-ground, but of old the site of the ancient cathedral, is only some 70 ft.

The date of the foundation of the Alcázar de Segovia, "*no se sabe*," said our guide, and to this same conclusion, due research being made, we are forced to come. Though, however, nothing certain can be affirmed as to the original foundation, the date of some parts can be fixed exactly. The picturesque bartizan tower bears the name of *la torre de Juan II.*, and belongs to that monarch's time, which includes nearly the first half of the fifteenth century.

The decorations of the Sala de los Piñas were executed by order of Henry IV. in 1452. There are a court and cloister of the time of Philip II., of which the granite pillars suffered greatly in the fire. In the Sala del Trono we observed walls and round-headed windows having every appearance of belonging to the twelfth century. The name Alcázar, which in Arabic means Palace of Cæsar, points to a royal foundation in the time of the Saracen dominion. The latter came to an end when Alonso VI. reconquered Toledo in 1085, and there is reason to suppose that the older portions of the actual walls are at least as old as his reign, and so contemporary with those of the city then erected (1073-1108).

The history of this Alcázar represents a compendium of the history of Spain during the Middle Ages. Segovia having been assaulted and destroyed by the Moors in 1082, Alonzo, after defeating them, confided the reconstruction of the Alcázar and walls of the city to Don Ramon, brother of Pope Calixtus II. At the same time the vacant city was repeopled by "Gallegos, Leoneses, Asturianos," and "Reojanos." The date of all this was 1088. The Alcázar was a favourite residence of Alonso VII., "El Imperador"; and of Alonso VIII., husband of Eleanor, the daughter of our Henry II. Berenguela, their daughter, was born therein. San Fernando, the conqueror of Seville, was brought up in the Alcázar. "Alfonso al Sabio," and tenth of the name, who counted a long list of kings among his vassals, also resided at Segovia. Tradition connects the name of that monarch with a notable incident in the year 1262, which is thus related by Colmenares, and perpetuated in some degree by the name of the saloon formerly called "Del Pabellon," and, since the above date, named "Del Cordon." It was publicly rumoured that the king had asserted "that had he been consulted at the creation of the world, some things would have been done differently," and that the king, reproved for his folly by his brother's tutor, had persisted in it. That very night a terrible thunder-storm fell upon the Alcázar, which, according to some accounts, killed several among the courtiers, divided the roofs of the building, and penetrated to the royal apartments. The King, on the following day, made a public abjuration and expiation. In memory of the event the cord of St. Francis was sculptured all around the room.

In the fourteenth century, in connexion with the Alcázar, we find Alfonso XI. and Leonor de Guzman, Pedro el Cruel, and Enrique de Trastamara, whose son, the Infante, A.B. 1366, fell from the arms of his nurse from one of its windows into the precipice beneath, and was killed on the spot. In the fifteenth we meet with Enrique IV. and Isabella the Catholic. In the year 1474 she was here proclaimed Queen of Castile and Leon; the Governor, Andres de Cabrera, and his wife, Beatrice de Bobadilla, having much contributed to her accession. Two years later, a riot having arisen against Cabrera, she rode boldly out among the rioters and awed them into submission by her courage and presence of mind. In 1520 the Alcázar held out against the rebellion of the Commeros, who, among other outrages, nearly destroyed the old cathedral, and so the place earned the gratitude of the Emperor Charles V. During the romantic expedition of our Charles I. to Spain, to pay his respects to the Infanta Maria, daughter of Philip IV., he was entertained here by the hereditary governor. Later on, the Alcázar was made a State prison, and at last converted into an Artillery College. It was burned in the year 1862. Whether this ever-to-be-lamented destruction was voluntary or accidental has not, as far as we know, been clearly made out; however, in December, 1881, orders were issued by the Minister of Public Works for the preservation and restoration of the Alcázar. The restoration is being carried on exactly in its ancient style.

In the illustration the reader sees the Alcázar as it appeared after the fire of 1862, and before the actual restorations were commenced. Not all the salient turrets or bartizans there appear, and even of those which do appear, several were damaged, and had to be taken down. Two picturesque sharply-pointed towers defend the north and south-west angles, which are united by the remains of a corridor, called "Galeria de los Moros." The grand tower or keep of the castle is arranged in two chief stages, the curtained corner turrets and parapet being in part destroyed. The entrance on this, the eastern side, is across the ancient moat of the castle. Several views of the Alcázar as it was before the fire are extant, and in these the beauty of the building is greatly enhanced. In these we see high-pitched gables; lofty, conical, and octagonal spires; picturesque projecting turrets between the bartizans, and the "Galeria de los Moros" has likewise its roof and spirelets complete.

The walls, exterior and interior, are covered with what remains of the very artistic Moorish decorations in stucco, representing circles and other geometric forms, bearing a remarkable resemblance to the Byzantine sculptured ornament of the portal of San Martin already mentioned. The saloons, Sala del Trono and Del Recibimiento, were splendidly adorned in the time of Enrique IV., already referred to. These details are called "frisos Moriscos," and adorn most of the apartments. The Sala de los Piñas (pine apples) is so-called from the decorations in the roof taking the form of that fruit. Although these details were executed by Moors, the general style of this apartment is rather Gothic than Moorish. Under this head, we noticed a great similarity between the geometric forms of the window tracery of the cathedral cloisters, apparently of the century of Geometric Gothic,—the fourteenth,—and the mural decorations in the Alcázar. Other saloons present more of pure Moorish style. The Sala de los Reyes, now destroyed in the fire, was a very beautiful apartment. The chapel of the castle was erected in the Gothic style, and the groining and other details were delicately executed. The bartizans or turrets of the castle keep are called *almenas* (battlements), and a tower, so defended, is known as *almenada*. The bartizans (original) on the west face, were, we understood, to remain, while most of the others required to be taken down on account of the damage they sustained in the fire. The stuccoed decorations on the outside of the tower are very effective and picturesque.

With the exception of the Sala de los Reyes, attributed to Alfonso el Sabio, most of the interior decorations we have mentioned belong to the reign of Enrique IV., or to about the middle of the fifteenth century. The style of these details, though showing Gothic influence, like other Moorish examples, from the thirteenth to the fifteenth century, was certainly the work of Moors, professing, doubtless, the faith of Mahomet, though living and working among Christians. This style is now called *Mudéjar*, from an Arabic word signifying *tributary*, and so applied to those Arabians in the Middle Ages who were subject to the Catholic monarchs of Spain. The *Mudéjar* style is now regarded as an important one, and some Spanish authors even advocate its restoration as a sort of national style. Edifices, such as the Alcázar de Sevilla, and the Casa de Pilatos of the same city, are sometimes classed as *Mudéjar*, though to an English eye they seem merely later developments of the Alhambra. In contrast to *Mudéjar*, though the two are often confounded, — even by Spaniards, — we have *Mozarabe*, a term applied as well to those Christians of Spain who were subjects of the Arabian monarchs as to the ancient Spanish rite of SS. Ildefonso and Isidore, still in vogue in certain churches of Toledo.

NOTES ON FLINT WORK, ESPECIALLY IN THE COUNTY OF SUFFOLK.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE tenth ordinary meeting of the Institute took place on Monday evening, Mr. Ewan Christian, President, in the chair.

Mr. W. H. White, the Secretary, having read a long list of nominations,

Mr. Cates said it was satisfactory from one point of view to find that provincial architects looked so highly on the advantages of the Examination as an introduction to their candidature. He wished the same feeling was more prevalent in London, and hoped that the good example set by these young men would have more weight with their metropolitan brethren. There were not only candidates from several parts of the country, but also from the colonies, Mr. England, one of the candidates, being the third from New Zealand who had passed the Examination.

The President agreed with the remarks of Mr. Cates, and considered it was very encouraging to find men from the outside wishing to enter their ranks. He hoped that what had been said would be duly attended to by the young architects of the metropolis and the southern counties.

Mr. Baggallay, a former Ashpitel Prizeman, and Gold Medallist of the Royal Academy, then read a paper on Flint Work, commencing by referring to his indebtedness to those gentlemen who had lent him drawings, and notably to Messrs. Aston Webb, E. Preston Willins, of Norwich, and Mr. Goodall. The subject, he remarked, was one worthy of being thoroughly sifted. It had been first suggested to him by a visit to the picturesque city of Norwich, and its splendid churches, nearly all of which were faced with flint. He examined the flint-work of some twenty buildings there, and was led from astonishment to admiration at the accuracy of the cutting,—in some instances it was impossible to insert a penknife where the mortar had fallen out. He had desired to make a thorough study of the subject; but though he had visited sixty flint buildings in Suffolk, he had only seen half a dozen outside Norwich in other counties, and he would therefore add to the title of his paper the words "especially in the county of Suffolk." The interest chiefly centred in the flush tracery and panel-work, and this was essentially superficial. They had been told that unless a wall was of one substance throughout it was a sham; but the essence of an untruth was that it should deceive, or be intended to deceive. Did they suppose, however, when they saw a man in a broad-cloth coat, that his shirt was of the same material? Or, again, did any one who saw a green meadow, jump to the conclusion that the earth was a ball of grass?

For an eloquent defence of surface architecture he would refer them to Ruskin's "Stones of Venice." Flint was in itself practically indestructible. The advantages of such a material for monumental buildings was obvious; it was, at the same time, intractable, and, except in its rougher state, expensive. The small flints commonly used occurred in almost all geological formations, particularly in chalk, gravel, and alluvial soils. It must not be supposed that the different tones of the flints were always original; he believed that more often they were black or grey stones faded, and that a growth of lichens also gave a certain appearance of whiteness to them. Flints might be mixed with mortar and cement, and used as concrete,—indeed, the body of many of the old walls was probably made of this. They might also be built up, as gathered, into rough rubble masonry, as was the case at all periods from the early round towers to the latest Perpendicular churches. In many churches near the coast flattish pebbles from the shore were used in a sort of herring-bone pattern. The next step was to break the flints, and use them in courses, or otherwise, the first being the most usual and artistic mode. For facing only, a further improvement was to split the stones with greater care, and to knock the white coating off, the splinters being stuck into the joints, probably to get an even black surface. This was termed "galetting." Roughly-dressed blocks of stone were used to form a sort of pseudo-diaper, and probably suggested the chequer later on. Rough patterns were also formed by the introduction of brick diapers, as in the old Bishop's Palace at Norwich. Gauged flint work was only a facing material, and might be used in most of the different ways in which such material could be employed. The great difficulty of cutting it no doubt suggested that it was worthy of being set in a framework. The earliest flint buildings were the round church towers. The stones were laid so carelessly, and with so little regard to an even surface, that it seemed to have been the intention to cover their nakedness with a coat of stucco. The fact of similar towers on the other side of the German Ocean being nearly always stuccoed, lent some colour to this theory. The value of stone was remarkably accentuated in some of the earlier Suffolk churches, as at Debenham, for instance. He did not believe that flints were used otherwise than as rubble until towards the end of the Decorated Period, and, for a long time after, the use of split or gauged flint was exceptional. He did not find that the gauged description was introduced before 1450, as St. Peter Mancroft was finished in 1455, Southwold Church in 1460, Walberswick Church in 1479-93, and Saxmundham Church in 1493, &c. He had once thought that before this time bands of brick, tile, or stone had been used to tie the facing into the wall and for other purposes. It seemed difficult to understand how otherwise the flush panel-work of the later time was suggested. Clyffe Church in Kent had alternate bands, but this was too far off to have had an influence over the East Anglian churches. The north aisle of Ixworth Church was seen to be regularly banded with courses of tile, but there were not many examples of bands with random dressed flint facing. In one church he found the nave walls were of elaborate courses of brick and flint, but this church seemed to be of a late period. About the conclusion of the Wars of the Roses, a North Sea trade was established on the east coast, and in consequence of the prosperity which followed, some of the most magnificent ecclesiastical buildings were erected. The suddenly-developed wealth would probably have enabled the builders to fetch good stone, but they evidently desired to produce rich effects with the flint. Once started, this spread like an epidemic. Every one strove to outdo his neighbour in the next parish in the extravagance of his designs, and although many beautiful features were produced, the results were not all equally satisfactory, there being a perfectly bewildering mass of designs. Mr. Baggallay then referred to the different styles in which the flints were used, and notably to the circular and square panels. There were running patterns, and the commonest diaper was a common chequer, which was used in some part of one out of every three churches, as in Southwold and other churches, and also in the guildhall at Norwich. There were bands consisting of various tracery patterns, and the texts and mottos so frequently found, might be termed running patterns. He also referred to the different panel patterns, with heads trefoiled, cusped, &c., and stated that panels sometimes took the forms of Perpendicular tracery by the vertical division of the heads. The flint panel was applied to most features of the churches. Among the beautiful features of the late churches in the eastern counties was the light open clerestory, by which a large amount of light was admitted far above the level of the eye, in the same manner as it shone into the Renaissance churches of Italy. In England this effect was somewhat spoiled by the aisle windows, but in the upper part of the Perpendicular churches a great breadth of design was reached; the manner in which the open roofs made one with the clerestory windows thoroughly satisfying one's sense of fitness. Mr. Baggallay here drew particular attention to the clerestories of the churches of East Stonham; Coddenham; Saxmundham, with its artistic detail; St. Clement's, Ipswich; Framlingham, Walsham-le-Willows, &c. Next to the clerestory, the porch was the most important part on which flintwork was lavished. The Suffolk porches would lead them to deny that the importance of the doorway had been overlooked in this country, and he would instance those of Halesworth, Blythford, Southwold, Mendlesham, and Ixworth. He next touched upon the use of flints in plinths and parapets, and alluded to the faces of the buttresses being decorated with flintwork, instancing the parapets of Woolpit and Walberswick churches, the former being a perfect architectural gem. The old builders seemed to have used the darkest flints in the lower courses, employing lighter shades as they ascended. Brandon in Suffolk had been for a long time the headquarters for the manufacture of gun-flints, and he went there to see the quarrying and cutting of the flints, which were doubtless almost the same as in Mediæval times. Each pit was worked by one man only, and was a shaft 40 ft. or 50 ft. deep. On the surface was a stratum of sand from 7 ft. to 10 ft. deep, with chalk containing large numbers of small flints. Below this was chalk, in which at intervals were found the large flints, never more than one stone thick. The largest stones, weighing a hundredweight or more, were seldom got whole. These were all lifted from stage to stage by the man who worked the pit, and the tools used were of the most primitive description. The lowest flints were those most in demand, being regular in shape, fine in texture, easiest to work, and of a pretty grey colour, which, however, often faded. The best were cut into gun-flints and gauged flints, while the commonest were used for rough walls and concrete. In conclusion, Mr. Baggallay said:—It is surely unnecessary to argue in favour of the occasional adoption in these days of cut flint facing, when the opportunity occurs, if only for the sake of a little variety. It is sufficient to point out that if plenty of long bonders, either of the flint itself or of stone, are used, the work is perfectly sound; and also that if it once be granted that facing at all is permissible, then for concrete walls what facing could be better than random dressed flint? The material would be the same or very similar, only of a better kind to that of the body of the wall, and the large quantity of mortar used would cause it to settle almost equally. In regard to the flush panelling, a great deal of which would necessarily be executed in gauged work, the list of prices I have collected shows that the cost would not be prohibitive, and from the point of view which I have attempted to show to be the right one, in which surface architecture appears as not only no sham, but the most sensible and artistic, then its own intrinsic beauty is the only recommendation for its revival, that it needs. And apart from mere revival, which is in truth but a backward step, it is surely capable of development, or at least of affording a few suggestions for those of us who desire to carry our art onwards. The most obvious of these is the substitution of other materials than the flints. Not to speak of gauged brickwork, which, treated in that way, would be at least as beautiful, there are varieties of marbles at command, at prices certainly high, but not, in these days of cheap carriage, altogether prohibitive. And in what way could marble be more appropriately applied to buildings than in slabs, cut to a form which does not suggest joinery, or any other material, and tied into the body of the wall by the stone frame which surrounds it; for, of course, we should not be guilty of imitating the fifteenth century to the extent of making that too merely superficial. Then we could use in a similar way decorative panels of majolica appropriate to the external decoration, like those of della Robbia. Is it quite impossible to sink the panels slightly, and decorate them with frescos? I will even dare to suggest that a modern building, decorated with well-designed tracery of the kind executed in white marble, delicately moulded, and the ground filled with mosaics, would rival in richness and might easily be made to surpass in beauty, the gorgeous fronts of Sienna and Orvieto Cathedrals; or a less extravagant proceeding would be to use or develope such banded work as that of Clyffe. The bands might be of a variety of materials,—stone and flint, brick and flint, brick and terra cotta, brick and faïence, &c. And any one who knows the beautiful effects of this banded work of the various Italian buildings will confess that it would be worth more than a mere trial. Probably some are thinking that these are impracticable suggestions, and there would be, of course, two difficulties in carrying them into practice,—one, to get, even so short a distance, out of the old grooves; and the other, to find a public who would appreciate or pay for our efforts to give them something worthy of this great, wealthy, and go-ahead nineteenth century. But surely difficulties should act but as spurs to our efforts, and I ask, at least, that the matter should receive consideration at your hands.

Mr. Cole A. Adams proposed a vote of thanks to Mr. Baggallay, and observed that the architectural Association last year visited some of the churches mentioned. Had he known the subject of the paper in time he would have placed some photographs taken by Mr. Robinson at the disposal of the Institute for exhibition.

Mr. Charles Barry seconded the vote of thanks, and said the subject had not received any extensive study by the architectural profession, partly, no doubt, from the want of a demand for flint-work. It, however, deserved a great deal more study than had been given to it, and it occurred to him that the flint architecture of England might well be made the subject for one of the essays of the Institute in the future. Except in England the flint architecture was, he believed, almost unknown, and, therefore, there was the greater necessity and opportunity for its study by English architects. It was curious that though the chalk formation where the flint strata was found prevailed over a large part of the country, the flint architecture seemed to be confined almost entirely to the eastern counties; for, though there was the same kind of architecture to be found in Sussex, he believed it was extremely rare in that country, and, at any rate, had not received the care and elaborate artistic treatment which had prevailed in Norfolk and Suffolk. They must, therefore, come to the conclusion that there was some object in adopting that style by the architects of the fifteenth and sixteenth centuries. What was that object? Most probably it was to obtain a greater development of the colour decoration which was known to have been the fashion of that period. The object could not have been economy, because the treatment seemed to be anything but economical. The object, therefore, was, most probably, to obtain colour represented in a durable material, together with a solidity of building. Colour decoration was again receiving the attention of the architect, and, it might be that, inspired by these old examples which Mr. Baggallay had discussed, there would arise a desire to use the flint-work of our forefathers. He could not agree with those who complained that inattention had been given, with a few exceptions, to the entrances of the churches. An exaggeration of the doorway often proved to be a defect. The doorway was an important feature no doubt, and, in some cases, might be emphasised without making it the chief feature in the design, but its exaggeration was altogether out of place, as witness the doorway of the Army and Navy Hotel in Victoria-street, Westminster.

Mr. W. M. Fawcett believed that the reason why flint was used more in Norfolk and Suffolk than in Sussex was because it was more difficult to get stone in the eastern counties than in Sussex. It was easy to get Caen or Portland stone by sea to Sussex, but not so easy to get it to Norfolk and Suffolk.

Mr. Charles Barry remarked that there was the sea coast in both cases.

Mr. Fawcett replied that that was so, but the stone would have to be carried farther in the case of the eastern counties. The stone used in Norfolk and Suffolk appeared to have been obtained from Barnack and floated down the canals to Lynn and Norwich. As to colour, he thought that much ordinary colour was used on the churches described, but it had now totally disappeared except in one or two instances in which only traces remained, such as Cockfield Church, Suffolk, in the stone panelling work. The panelling at Ixworth Church also suggested that colouring had been used on the stone. He did not believe that the plastering used in these churches was put on in the same way as concrete was now used, viz., with boards and planks. With regard to the method of laying the stones, he believed they were then laid with greater care than now, the utmost care being taken that each stone should rest horizontally on its whole under-surface, instead of giving a degree of unrest to the whole wall by being tilted as at the present day.

Mr. Lacy W. Ridge remarked that there appeared to have been no influx of wealth in the thirteenth century, and the consequence was that almost without exception the twelfth-century churches existed. There was a good deal of square flint-work in square panels, alternating with stone panels, but little beyond that.

Mr. Aston Webb referred to Long Melford Church * as a model example of the use of flint and stone work in their most legitimate way. In the case of modern work it was necessary to use the stones in bands. The only modern example he knew was that of a house in Brighton built with flints, which was a charming example of their legitimate use.

Mr. James Fowler (Louth) said that in Lincolnshire and East Yorkshire he could not call to mind one example of this sort of work, because, although they were chalk counties, flints were very scarce there. He wished, for the sake of architecture, that there were plenty of them.

The President, referring to the round towers, said that these had been matters of interest to him for many years. He had examined them in all parts of the country, and had come to the distinct conclusion that they were not of a later date than the rest of the churches. With regard to the matter of decoration, he did not believe that any of the Mediæval work ever partook of the nature of a sham. These flints, which looked so nice and square in the panels, had at the back a strong affinity for the wall; and there was no stronger wall than a flint one, rubble-built. It certainly required a good proportion of flints and good lime, but he could give some remarkable instances of the tenacity of flint-work. The chancel of Cromer Church was destroyed some 200 years ago, and four years back he was asked to state what its restoration would cost. He spent seven hours over the work, and from the stone and flint work on the ground he was able to reconstruct minutely every detail as it originally stood, and give an estimate of the cost, which was 10,000*l*. He believed that in Mediæval times the rubble walls were plastered. In modern days people had been very much afraid of plaster, but if properly executed, with the right materials, it was a sound and legitimate mode of covering a rubble wall, only the old plaster was totally different from our modern cement. The making of inscriptions round buildings was one of his old fancies. It was an ancient and wholesome German custom, and had been made an ornamental feature in Norfolk. At Mendlesham he got a coal-hammer and thumped away at the walls. It was like striking the granite rock; there was a solidity of sound about it which was delightful to hear.

The vote of thanks was then carried by acclamation.

Mr. Baggallay, in reply, said that he had understood the Architectural Association's excursion was confined to the neighbourhood of Bury St. Edmunds. He knew of no flint-work abroad, except some simple diaper-work near the coast of Normandy, which might be attributed to English influence.

The Society of Science, Letters, and Art of London has awarded the gold medal of the Society to Mr. W. P. Buchan, Glasgow, for "Practical and Literary Contributions towards the Advancement of Sanitation."

* See illustration in *Builder* for Aug. 23, 1884.

NOTES ON THE ANCIENT CHURCHES OF LONDON.*

IT is proposed in this paper to refer to the group of churches existing or formerly existing within the walls of the City, or so close to the latter as to cause them to be a portion of the City, to all intents and purposes; to make some observations upon their dedications and orientation; and finally, to describe the portions of the ancient buildings which have survived all the visitations of time, the accidents of fire, and the hands of the "improver," to our own times.

An ordinary passer through the streets of our great City, so crowded during the day, and so deserted at nightfall, is not so impressed as must have been our grandfathers with the great number of churches within the limited area of the City. A glance at any old view of London is sufficient to show what a fine effect was produced by the towers and spires of these buildings rising high above the houses, of lesser height which then formed London. To a greater degree is this so if the view we are inspecting is that of the City before the Great Fire of 1666, which levelled so many of the sacred buildings of the City which were not afterwards rebuilt. Now the number is still further diminished, while the lofty nature of the buildings erected from one end of the City to another, often higher than the church-towers themselves, has completely destroyed the relative scale of proportion between the churches and the other buildings, and the appearance is diminished accordingly.

The number of parish churches existing before the Great Fire was 109, of which number thirty-five were not rebuilt after that event. If we add to these the names of the four churches removed in the fifteenth and sixteenth centuries we have no fewer than 113 churches as having once existed in London, apart from the cathedral and the great monastic establishments. There is record, too, that there were in the twelfth century three or four old parishes incorporated in the new Priory of the Holy Trinity, Aldgate.

Although these figures are well known, attention has not been drawn to the very remarkable grouping of these buildings. They do not cluster around the cathedral as in many other Mediæval cities, such as in Paris, for example, but they are the closest together more to the east of the cathedral. A reference to any old map where the churches are marked (Vertue's, for instance), shows this at a glance.

Let us, however, be a little more precise, and render the result of measurement. Taking the statue of King William IV. as a centre, and striking a radius of only a quarter of a mile, we find that the whole of the following churches formerly stood within this small space, notwithstanding that a large portion of the half-mile circle is occupied by the Thames:—SS. Michael (Paternoster Royal), John Baptist, Mary Bothaw, All Hallows the Great and the Less, Laurence Pountney, Martin Orgar, Michael (Crooked-lane), Swithin, Mary Abchurch, Stephen (Walbrook), Mildred (Poultry), Christopher-le-Stocks, Bartholomew, Benet Fink, Mary Woolnoth, Nicholas, Edmund the King, Peter (Cornhill), Michael (Cornhill), Allhallows (Lombard-street), Benet (Gracechurch), Gabriel (Fenchurch), Allhallows Staining, Margaret Pattens, Andrew Hubbard, Leonard (Eastcheap), Margaret (Monument-yard), George, St. Mary-at-Hill, Dunstan-in-the-East, Botolph, and Magnus,—or thirty-five in all.

This extraordinary group of churches has not its parallel in any other city of Western Europe, Rome itself not excepted; and the reason for their being so crowded together is a problem far more readily proposed than answered. Its solution is difficult, but we may at least be content to consider the fact. If we enlarge the radius of our circle, we shall find that proportionately the number of churches is increased up to a certain distance, but no more; but the small space noted is sufficient for attention to be called to the remarkable fact indicated.

Following the analogy of arrangements in other cities, we may reasonably conclude that these churches were erected where the population was the thickest, and where, in consequence, they were the more needed, a conclusion which receives some support from the fact that away from the centre indicated, the churches gradually dwindle away until but a few only are found, one at each of the gates of the city, fewer still away from the walls, and still less along the line of the ancient thoroughfares of Fleet-street and the Strand. It will be observed, however, by reference to Faithorne's map of the City as it was before the Great Fire, which shows generally the outline of all the churches, that the orientation of these buildings was fairly perfect, showing that it had been carefully and purposely studied. I conclude from this that whenever these buildings were founded space was sufficiently at command to admit of this being provided for, even although they were erected in what were then the most closely-populated portions of the then existing city.

The periods of the foundation of these buildings ought to be clear to us among the mass of documentary evidences of all kinds that have been handed down to us, and by the painstaking researches of so many generations of antiquaries from the time of Stow to the present day.

Such, however, is far from being the case. Stow speaks again and again of the building of churches, money being left by will, one citizen helping in this good work of building, another in some other, and the like. This occurs from end to end of his carefully-compiled history.

His numerous continuators and successors have not added much in addition, except of the same kind. When we examine more closely these evidences, we must come to the conclusion that the works named were but the ordinary works of rebuilding upon an old, and not the construction of a new foundation,—in fact, that churches had been on the sites long anterior to the works named. Thus, for example only, it is related that W. and John Oteswich were the founders of St. Martin Outwich; but it is evident that the church existed before their time, since John, Earl of Warren and Surrey, was its patron, *temp.* Edward II. St. Stephen's, Walbrook, it is related, was built in the fifteenth century, but a new site being mentioned, it is evident that the parish was not a new one, and we find a reference to its existence *temp.* Henry I. Allhallows, Lombard-street, was built in 1516, but there is a reference to it before the Conquest. Augustine's Papey was founded in 1430, but the church is mentioned early in the preceding century.

We glean, however, the following from older records than Stow:—

The Church of Canterbury was the patron of many churches in London, called peculiars, thirteen in number, which appear to have belonged to that foundation from a very early period. I can find no reference to the actual dates when they were presented to Canterbury but from this circumstance, the date is likely to be an early one, and the more so since some changes of patronage and transfers of later date have been carefully recorded. St. Martin Orgar is stated to have been given by Odgarus in early times, and Allhallows, Lombard-street, by Brightmenus, citizen of London, 1053 or 1054.

There is reference to the patronage of several churches in London being held by the Dean and Canons of St. Martin's-le-Grand. They were possessed of these anterior to the Conquest, since William the Conqueror, by a charter so early as 1068, confirmed them in their possession, One of these, the Church of St. Alphege, is mentioned by name. The following churches are known to have been in their patronage at a later time, and they are probably those to which reference was intended in the charter referred to:—St. Anne, Aldersgate; St. Botolph, Aldersgate; St. Katharine Coleman.

We are informed by Newcourt, in his *Repertorium*, that several churches were collated to the Dean and Chapter of St. Paul's. No evidence is forthcoming as to when they were bestowed, but we find that in the time of Ralph de Diceto, dean from 1181 to about 1204, a survey was made, and we know from this that the following churches were then in existence, as they had been probably for a long time before:—SS. Anthony; Augustine; Benet, Gracechurch; Benet, Paul's Wharf; John Baptist, Walbrook; John Baptist (Zachary); Mary Aldermary; Mary Magdalen; Michael, Queenhithe; Michael-le-Quern; Olave, Jewry; Peter, Paul's Wharf; Peter-le-Poor; Stephen Coleman; Thomas Apostle; and that St. Nicholas Olave was given to the Dean and Chapter by Gilbert Foliot,

* A paper by Mr. E. P. Loftus Brock, F.S.A., read before the St. Paul's Ecclesiological Society, in the Chapter House of St. Paul's, April 15th, 1885.

Bishop of London in 1163. Had the others been presented at a later date, I think that there would have been a record. As it is, their gift seems to be lost in the dim past.

Matthew Paris relates ("Lives of the Abbots of St. Alban's") that in the time of Paul, fourteenth abbot, 1077, there were many churches in London belonging to St. Alban's, of which St. Alban's, Wood-street, was one. It is said to have been originally a chapel erected by King Offa.

St. Botolph is said to have been founded about the time of the Conquest, and St. Mary-le-Bow was being built at the same time.

St. Botolph, Billingsgate, seems to have been of early foundation, for the gate was called Botolph's Gate *temp.* Edward the Confessor.

The body of St. Edmund rested for three years in the Church of St. Gregory.

There was certainly a church at St. Helen's before the foundation of the Priory, and called by the same name.

St. Margaret Moses was given to the Priory of St. Faith, Norfolk, in 1105, by the founder.

St. Martin, Ludgate, is said by Robert of Gloucester to have been founded by King Cadwallo, who was buried there in 677. This reference is, however, of more value to show that the church was there at the early date at which this author wrote.

St. Martin, Vintry, was given to the Abbey of Gloucester in the time of the Conqueror, and St. Mary Woolchurch at the same time to St. John's, Colchester; St. Michael's being given to Evesham by Alnothar the priest about the same time; St. Nicholas Acon being given to Malmesbury in 1084.

The evidences of new parishes are clear enough, but they are not numerous. They are as follows:—St. Mary Woolchurch appears to have been one, since it is called a new church. St. Mary-le-Bow was built *temp.* William the Conqueror. St. Mary Mounthaw was a small chapel at first attached to the House of the Mounthaunts. St. Leonard, Foster-lane, was founded between 1231 and 1241. Holy Trinity, Minories, grew out of the Nunnery at the Dissolution, as did Christ Church parish at the same date, on the suppression of two smaller parishes, following at this later date what was effected when Holy Trinity Priory, Aldgate, was founded at an earlier one, when three or four old parishes were suppressed. St. James, Duke's-place, was founded 1622, on the dissolution of this priory; and St. Anne, Blackfriars, 1597, on the demolition of the old parish church with the conventual one.

This is a brief outline of the recorded history of the London parishes, and it justifies the remarks made with respect to its meagre nature. This does not apply to the foundation of the Norman and later monastic establishments, of which the recorded dates are ample,—numerous in later times, but apparently very few in number anterior to the Conquest. The later histories of the parishes, too, are precise enough, and no work of building of especial note appears to be without its record. All this, however, points to the uncertainty which hangs over the foundation of the great bulk of the London parishes; for it will be apparent from what has been named that the early records for the most part speak of the parishes as then being in existence. Not a word is said to justify the belief that they were new creations of that exact period. Had they been so it would, we may naturally expect, have been stated. This was so, in fact, as we have seen, in the one case which has been referred to, of St. Mary Woolchurch, and of the new buildings, also at St. Mary-le-Bow and St. Giles, Cripplegate. We know also the circumstances which called the parish of St. Leonard, Foster-lane, into existence. Should we not have had records equally precise if the other parishes were even of but moderately early date?

We are forced, I believe, to the conclusion that the vast mass of the City churches, crowded together as they were, were founded in times anterior to the Norman conquest.

This is a conclusion somewhat startling, and it opens up to us a field of inquiry of no small interest. What were the forces at work to produce so great a number of churches in so small an area, and when it is but reasonable to conclude that the population must have been small comparatively for the space? How was it that the foundation of other churches ceased to so great a degree at the Conquest? When did it begin? How was it that other churches were not founded to keep pace with the increase of the population and the growth of the City westward?

When we come to consider the dedication of the buildings we find evidence which points equally to an early rather than to a late foundation. Let us consider the names of the saints to whom the churches are dedicated.

St. Alban, the proto-martyr of England, occurs once; Allhallows, the old Saxon form of All Saints, no less than eight times; St. Alphege, the archbishop, murdered by the Danes, once; St. Andrew, four times; St. Anne, twice; St. Anthony, once; St. Augustine, once; St. Bartholomew, three times; St. Benet, three times; St. Botolph, four times (at three of the gates of the City); St. Bride, once; Christ Church (as a parish), once; St. Christopher, once; St. Clement, once; St. Dionysius, once; St. Dunstan, twice, once at each end of the City, east and west, in fairly corresponding positions; St. Edmund the King, murdered in 866, once; St. Ethelburga, once; St. Ewan, once; St. Gabriel, St. Giles, St. George, St. Gregory, St. Helen, once each; St. James, twice; St. John the Baptist, twice; St. John the Evangelist, once; St. Katherine, twice; St. Lawrence, twice; a like number to St. Leonard; St. Magnus, once; St. Margaret, four times; St. Martin, five times, apart from St. Martin's-le-Grand; St. Mary, fifteen times; St. Matthew, once; St. Michael, seven times; St. Mildred, twice; St. Nicholas, four times; St. Olave, three times; St. Osyth, once; St. Pancras, once; St. Peter, four times; St. Stephen, twice; St. Swithin, St. Sepulchre, St. Thomas the Apostle, the Holy Trinity, and St. Vedast, once each.

There seems never to have been a change of dedication. The names by which the churches are known in early times are those recorded in later ones. St. Osyth, however, was called afterwards by the name of its rebuilder, Benedict Shorne, *temp.* Edward II. There is also reference in a list of the churches under the patronage of Canterbury to one dedicated to St. Wereburg. St. Agnes occurs as a double dedication with St. Anne.

The mention of these names will at once show that many of them are of saints who were popular in Saxon rather than in Norman or later times, and thus evidence of another kind is adduced in support of the foundation of a large number of the London churches in times anterior to the Conquest. The dedications to SS. Alphege, Benet, Botolph, Edmund, Mildred, Osyth, Ewan, Olave, Dunstan, Ethelberga, and Swithin, are so thoroughly Saxon as to render it far more probable that they would have occurred when Saxon influence was strongest, rather than when it was weak. The dedication to St. Pancras is likely to be very ancient, since it was introduced by Augustine at Canterbury. So are also those to SS. Bridget, Anthony, Augustine, Benet, and Dionyisius. St. Martin was always popular in England as he was in Wales, Gaul, and Switzerland, and, from the continuance of his popularity from early to later times, no safe deduction as to the age of the dedication can be drawn from the naming of a church after him. Still, of the number of churches so called in the City it is within the range of fair reasoning to believe that some of them are of remote antiquity. We must, in this respect, bear in mind that it was to this saint that Augustine, on his arrival, found the little Roman Church at Canterbury already dedicated. It is desirable also to note that, of the other dedications, there are none, not even to St. George, that might not have occurred in Saxon as well as in later times. St. Mary, St. Michael, and Allhallows were, in fact, as favourite dedications in the earlier days of the church in England as they were in later ones.

There is, however, another statement referred to by more than one of the older historians of London, and it appears, too, in the church itself. This is the foundation of St. Peter's-upon-Cornhill by the British King Lucius, in Roman times. This is the Lucius who, in the year 156, according to Bede (although I do not think that the statement is more than a compilation from other sources), sent a letter to Eleutherus, Bishop of Rome, "entreating that by his command he might be made a Christian." This statement occurs also, much in the same terms, in the Saxon Chronicle and in the Book of Llandaf. All these, of course, were compiled long after the event; probably it occurs also in other records, after the usual manner of the times, one compiler following another frequently in the same words. On the face of it the statement appears more like a pious fraud of the seventh century than a contemporary record of the second. At that early time evangelical doctrine would prompt a man to appeal to the Great Head of the Church rather than to a pope for direction in the spiritual life. In the seventh, it was not unimportant to show to the ancient Church of Britain, flourishing in the un-Saxon parts of the country, and still independent of Rome, that in the earliest times popes were appealed to by the British Christians. The statement will not bear investigation, for, as has been shown more than once, Eleutherus was not Bishop of Rome until at least twenty years after the date named. There are two emperors named in the statement, Commodus and Verus, as reigning together, which they never did; and to this may be added that King Lucius himself belongs so entirely to the realm of romance rather than history that we have no reliable evidence of the actual existence of such a personage. I believe fully in the existence of Christianity in Britain in ancient Roman times, in that of a Bishop at London, and consequently of churches in this remote period; but we may dismiss the record of the foundation of St. Peter's-upon-Cornhill at this time as being too uncertain for service in our inquiry. The relics of the existence of Christianity in Roman times which have come down to us consist of personal ornaments, some plates of metal marked with the Chi Rho, now in the British Museum, and the like. They are few in number, but are important in their evidence. The reference to St. Peter's may be the dim indication of a remote tradition, similar to that which points to the foundation of the earliest cathedral on the site of the present building beneath whose shadow we are gathered. There is another tradition worthy of passing remark. Stow relates that the descriptive "Staining" attached to the Church of Allhallows, Mark-lane, was in consequence of the building being erected originally of stone, when so many others were of wood. Stow could not have foreseen the discussions among ourselves as to the erection or non-erection of stone churches in Saxon times, and his record of what was thought in his day to be the reason for this name is of interest to us, as marking a state of things likely to have existed in the City, but only in early times.*

ARCHITECTURE IN THE NINETEENTH CENTURY.

This was the title of a lecture delivered by Mr. George Aitchison, A.R.A., on Thursday evening, April 16th, at No. 9, Conduit-street, Regent-street, at a meeting of the Society for the Encouragement of Fine Arts. Mr. Ewan Christian, President of the Royal Institute of British Architects, occupied the chair.

The Chairman, in opening the proceedings, said he had no doubt the lecture to be read that evening would be an interesting one. It was upon a very interesting subject, but he was told that it was upon architecture generally, and not upon that of the nineteenth century in particular. Architecture generally concerned all; it concerned them in their homes, and in their walks abroad, and in the character of the nation. It concerned them in their homes because, unless their homes were made comfortable and pleasant by their surroundings, a great deal of the pleasure of their lives must necessarily be curtailed. It concerned them very much in their walks abroad, because there was nothing more miserable than to see, as they were obliged to see in some parts of London, miserable designs most miserably carried out. One of the tortures of his life was to walk through some of the suburbs of London, where one could see street after street of houses, supposed to be for the working classes or mechanics,—people who ought to be instructed in the knowledge of architecture, and, at any rate, ought not to have things put before them that were miserable specimens of bad taste. If, however, one walked through streets where there were beautiful buildings designed by good architects, and where mind was clearly shown in every detail as well as in the main outline of the work, then they had something which was a pleasure to look upon, and which added to the charm of their walks through the streets. He often thought how little architects were properly considered in that matter. There was

* To be concluded in our next.

no greater benefactor than a great architect. He was a benefactor to every person who walked along the streets. What would London have been if such a man as Sir Christopher Wren had not been living at the time when the Fire occurred? Where would have been the beautiful towers and spires of London? Where would have been that wonderful view,—the most beautiful City view he knew of, and which he did not think was to be surpassed anywhere in Europe,—the view looking up Ludgate-hill, with the beautiful spire of St. Martin's, Ludgate, backed by the magnificent dome of St. Paul's as the culminating point? In the City of London there was as fine a collection of towers and spires as was to be seen in the world. However, such a man as Sir Christopher Wren did not arise in every century. In the present century, when the Houses of Parliament were burned, there was fortunately a Barry to come forward to produce that magnificent palace at Westminster. People might and did quarrel with it, still it was a magnificent building. Then, again, the completion of Somerset House, towards Wellington-street, was one of the most beautiful things done in this century, according to his idea. Then there was the beautiful building of the University of London, which was one of the finest Classical buildings of modern times. Having mentioned several other buildings, the Chairman concluded by saying that the subject of architecture was one of the most important that could be considered.

Mr. Aitchison in the course of his lecture remarked that Sir H. Wotton said that "Architecture can want no commendation where there are noble men, or noble minds." Architecture was looked upon in England with very different eyes to-day to what it was in the first quarter of the seventeenth century. The finest buildings never excited enthusiasm, rarely even gratitude. No fine art existed unless there was an effective desire for it; and for architecture there was the greatest indifference. If architecture was to be excellent there must be a general and passionate desire for it; and amongst the architects a keen desire for appreciation and honour, and "that last infirmity of noble minds," fame, must be the incentives. It was just possible some of the fine arts might be cultivated for personal delight. To find the materials to follow the pictorial arts was within the means of all; and a lump of clay for modelling was easily obtained by the votary of sculpture. But that could hardly be the case with architecture, because that was an especially costly art, and could only be indulged in by wealthy persons and States, but when once embodied it could be enjoyed by everybody for nothing. Man was a thoughtless, selfish, ungrateful creature, for many of his greatest benefactors had begged their bread. Homer to wit. Many of the different arts that made up architecture could to some extent be understood by the present luxurious, practical, and prosaic generation. For example, the public could understand the advantage of a building not falling down; that it was not deformed by cracks and bulging; that it was well lighted, and could be easily and thoroughly warmed. It was the appreciation of architecture and of its treatment that he wished to enlarge upon. There was no fear of the Englishman of to-day not being keenly alive to anything that would touch his pocket. Architecture meant the rhythmical arrangement of the exterior of a building,—the proper proportion of parts to each other and of parts to the whole, the proper alternation of light and shade, the impressiveness or picturesqueness of the whole outline from various points of view, the arrangement of the interior in proper proportions. When all this was done, and done well, they had good architecture; but each age had, or should have, its own peculiar ideal. So far as he could see, the civilised world for some time past has had no ideal, and consequently the architects could not produce it. The leaders of architectural criticism were like the political leaders in the sister isle, they did not know what they wanted, but they were determined to have it. Architecture had always sprung from something, a cave, a hut, or a tent, and had been but slowly modified, improved, and perfected. The hope dearest to his heart was to see the public loving and desiring architecture, and making up its mind what it would like,—simplicity, grandeur, or picturesqueness. The most important thing for architecture was for people to love it, and, to love anything much, it must be understood. People nowadays who spoke of architecture spoke of it disparagingly, and said they knew nothing about it, and, they might well add, they cared less. A good idea of what is the fate of architecture in the present day is that people only ask if they can get their work done at current prices. They all knew the miserable pittance a grateful country paid Sir Charles Barry for a labour of twenty-five years, 40,000*l*. Few living architects were known by name outside their own profession, and he did not believe there was a knight among them, but if there were he obtained the title in return for political assistance. Few men who could afford to build a house did so; they bought or hired a ready-made one. The wretched leasehold system went some way to make London the most common-place capital in Europe, for who would give time, money, and thought to a place when it must lapse to a stranger? Styles were only the expression of what people liked at a certain epoch. Each generation of architects acquired more skill and endeavoured to keep closer to the changes of its day. They had had the Gothic revival, which had done excellent service, but it was doomed from the first to be but ephemeral. Whether they were to have good work, or whether they were to have bad work, must be left for the present or future generation to decide. Until the public knew what they wanted, and until they learned to like something, how was it possible to invent anything for people's delight? The public, by its ignorance and apathy, lost one of the tasteful pleasures of life. Music and Architecture both suggested to men thoughts, feelings, that might be more important than words. It was impossible to give a reason why certain proportions gave pain or disgust; why others raised no emotion, while others gave delight. There were many fine buildings in London. The much-abused National Gallery was beautiful in in its central portion, and the Reform Club was, perhaps, the most perfectly proportioned building in Europe. To render architecture perfect it must be associated with sculpture and painting. St. Paul's and Westminster Abbey were the epitome of London; the Pyramids, of Egypt; St. Peter's, of modern Rome; and Sta. Sophia, of Constantinople. When the glory and greatness of a city had passed away, nothing so forcibly reminded people of its former magnificence than the architecture of its buildings. Architecture was one of the expressions of national life, but it seemed in the present day to be entirely overlooked. It could not be denied that the small villas lately built in London were more tasteful than they have been since Mediæval days. The striking characteristic of modern buildings was their flimsiness. They appeared to be built for temporary use, and a few years would see them in ruins, were it not for the fostering hand of man. They all bore marks of having been built for one man's lifetime, after which they would pass away. As to churches in good Queen Anne's time, they were expensive structures, costing as much as noblemen's mansions; while nowadays they were little better than sheds of rubble. It was almost a desecration to call some of the present buildings churches, for they only offered a place for prayer, rest, and shelter for one day in the week. England was said to be richer than she ever was before; but one was inclined to doubt it under the circumstances. They heard of colossal fortunes being made in manufacture, but what did the rich do with their money? It took three years' income of a labourer to build him a good cottage; yet what millionaire could point to a house in London that had cost him three years' income? Then, again, this country had a national income of 80,000,000*l*.; but in the last fifty years had one year's income been expended per annum upon public buildings? In conclusion, the lecturer remarked that he was afraid they would say they had heard nothing about the nineteenth-century architecture; but they must blame the printer for that, and not him, as he never said a word about the nineteenth-century architecture, and never intended to say a word about it.

The Chairman observed that they had heard a very interesting lecture on architecture, and Mr. Aitchison had told them some home truths.

Mr. E. P. Loftus Brock (Hon. Secretary), thought Mr. Aitchison had said a great deal about nineteenth-century architecture, and they might look forward much more hopefully as to what the architecture of the next century would be. He was glad to find that the nation could not do without architects. He fully endorsed what the lecturer had said as to the nature of the building of some of the churches in the country. No house was built now unless it was made to appear with some style, and shopkeepers vied with each other in making their shops look pretty. The result was there was an amount of display in some of them which augured very well for what would be done a little later on. If they contrasted old buildings that were erected at the commencement of the century with those of the present day, what a difference there was. Then, again, at the present day, good materials were used, and they were not content with cement and sham marble and things of that kind, such as he remembered being used thirty years ago. Architects must be content with small things. These were not days for building cathedrals or grand mansions, so they must be content with the small fish that were floating about in the present waters.

The Chairman proposed a vote of thanks to Mr. Aitchison, which was seconded by Mr. Edmeston, and agreed to.

Mr. Aitchison replied, and the proceedings terminated.

Illustrations.

THE CATHEDRAL AND ALCÁZAR OF SEGOVIA.

THE subjects of the two double-page ink-photos which we give this week,—the Alcázar, Segovia, and the Cathedral of the same city,—will be found described and commented upon at some length in the article entitled "Notes in Spain, Architectural and Historical," printed on a preceding page. (See p. 577.)

BLOCK OF BUILDINGS IN GREAT TOWER-STREET, E.C.

THIS block of buildings has been recently erected by the City of London Real Property Company (Limited) in Great Tower-street and Mincing-lane for office purposes.

The premises are five stories in height, and have frontages to Great Tower-street and Mincing-lane of 147 ft. and 83 ft. respectively. The street fronts are constructed of red sandstone, supported on pilasters and plinths of polished grey and red Aberdeen granite. There are main entrances in both streets, and subsidiary entrances to the ground-floor offices in the Great Tower-street front.

The basements facing the streets are well lighted and used as offices.

The staircases are of ironwork with Craigleith stone steps and landings. The dado on the stairs and in the corridors is formed with glazed tiles of suitable pattern and colour. The building is roofed with Broseley tiles.

There is a large amount of ironwork used in the construction.

There are lavatories in various parts of the building; and water and gas are laid on to almost every room. The building is well lighted in every part.

It has been constructed from the designs and under the personal superintendence of Mr. Edwin A. B. Crockett; the contractors being Messrs. E. Lawrance & Sons, whose general foreman was Mr. Chandler.

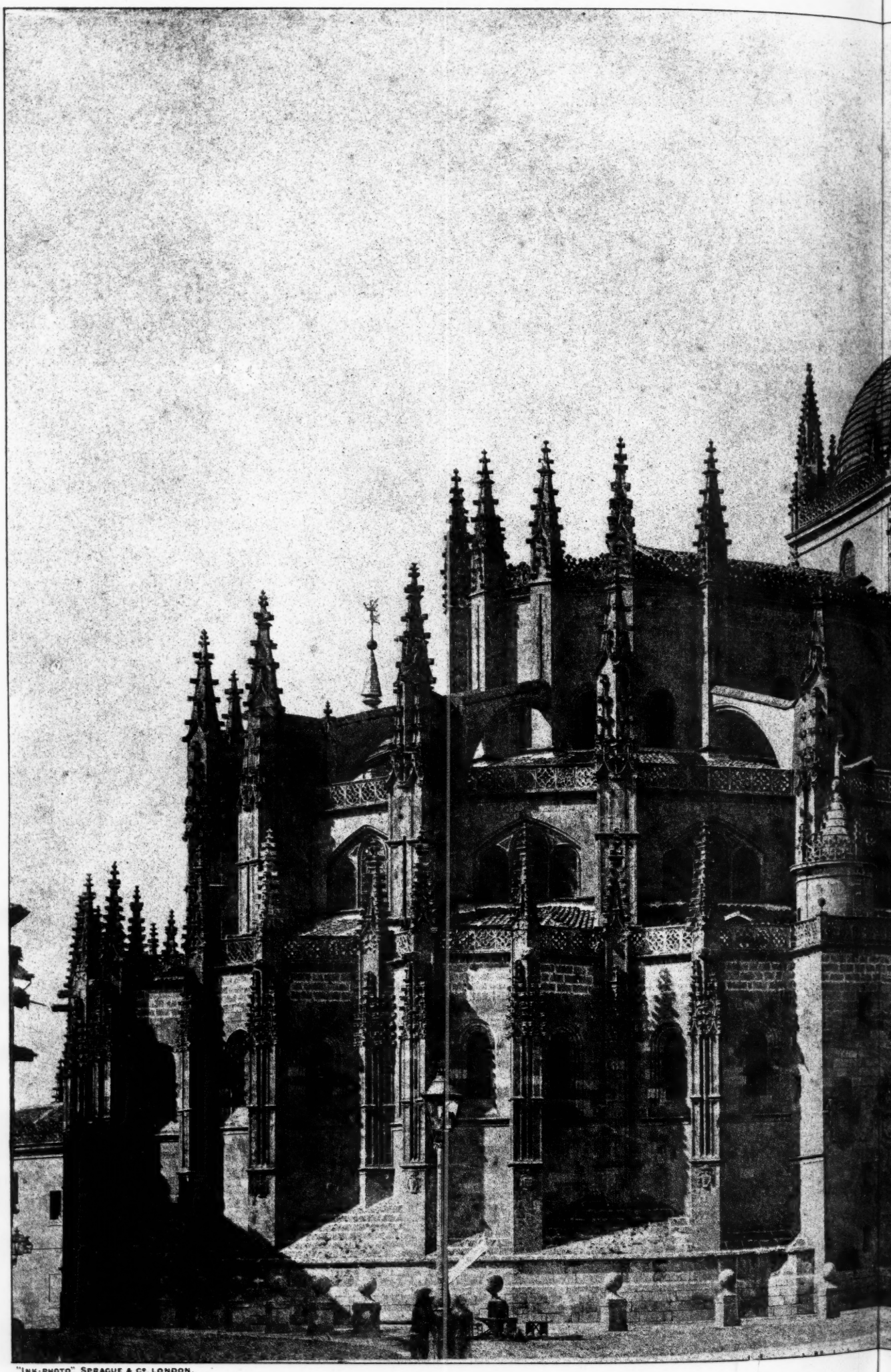
NEW SHOPS, GUN-STREET, READING.

THESE buildings, of which we give a geometrical elevation, have recently been erected from the design and under the supervision of Mr. Ravenscroft, of Reading; Mr. Searle, of the same town, being the builder.

The work has been substantially and satisfactorily carried out, and the street front, composed chiefly of red rubbing bricks and Luton bricks, has been very carefully executed; the whole of the mouldings and carved portions being executed by hand.

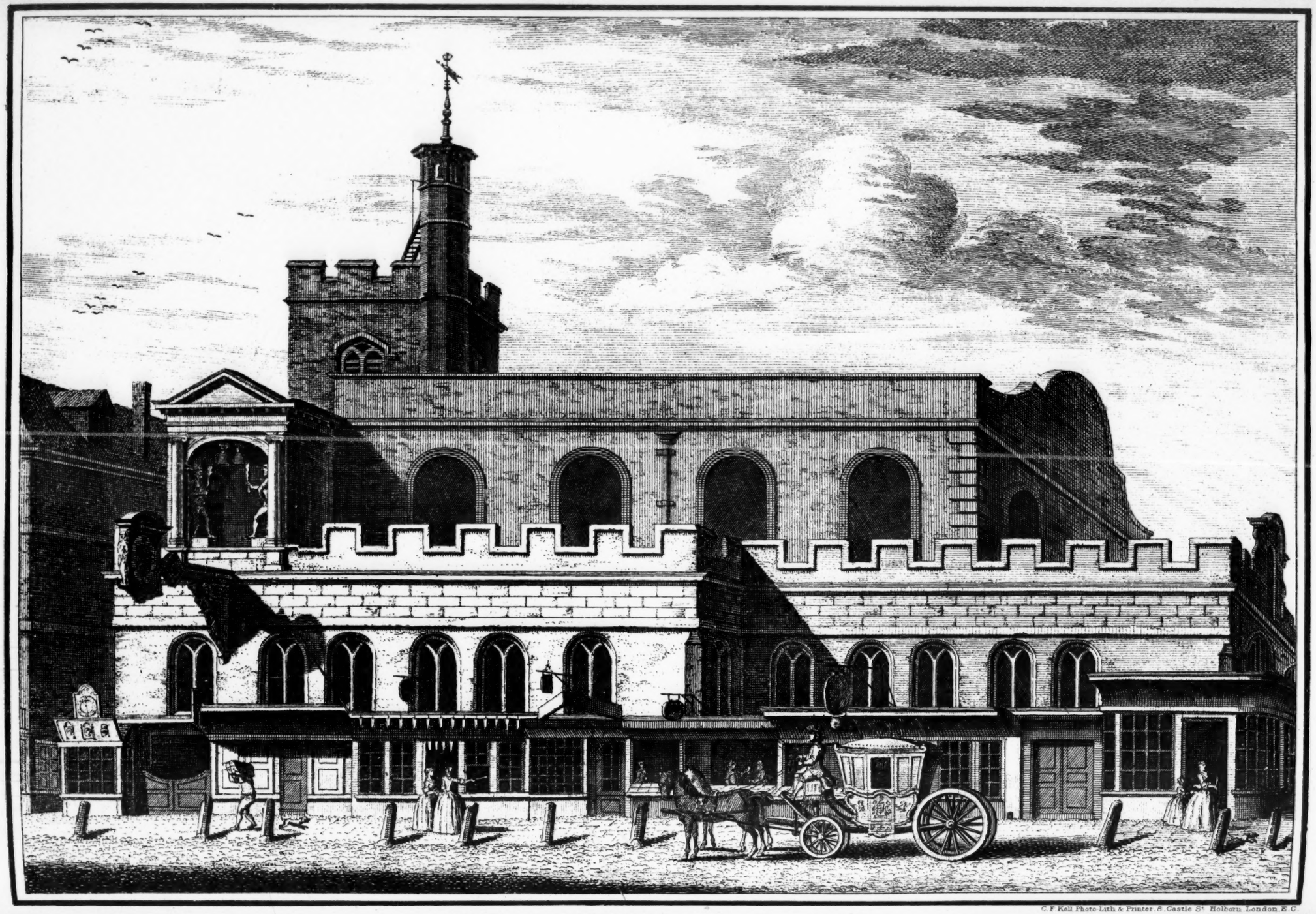
Internally, these buildings are fitted with lifts and other business appliances; and the shops are warmed by means of hot water, and ventilated by shafts carried up in the chimney-stacks, &c.

The total cost of the two shops amounted to just over 2,200*l*.



"INK-PHOTO", SPRAGUE & Co, LONDON.

THEDRAL, SEGOVIA.



OLD LONDON CHURCHES. *St. Dunstan-in-the-West.*

C. F. Kell Photo-Lith & Printer, 8, Castle St. Holborn London, E.C.

Wyman & Sons, Photo-Litho.

BLOCK OF BUILDINGS IN GREAT TOWER STREET AND MINCING LANE, E.C.——Mr. Edwin A. B. Crockett, Architect.

C^t Queen S^t London, W.C.

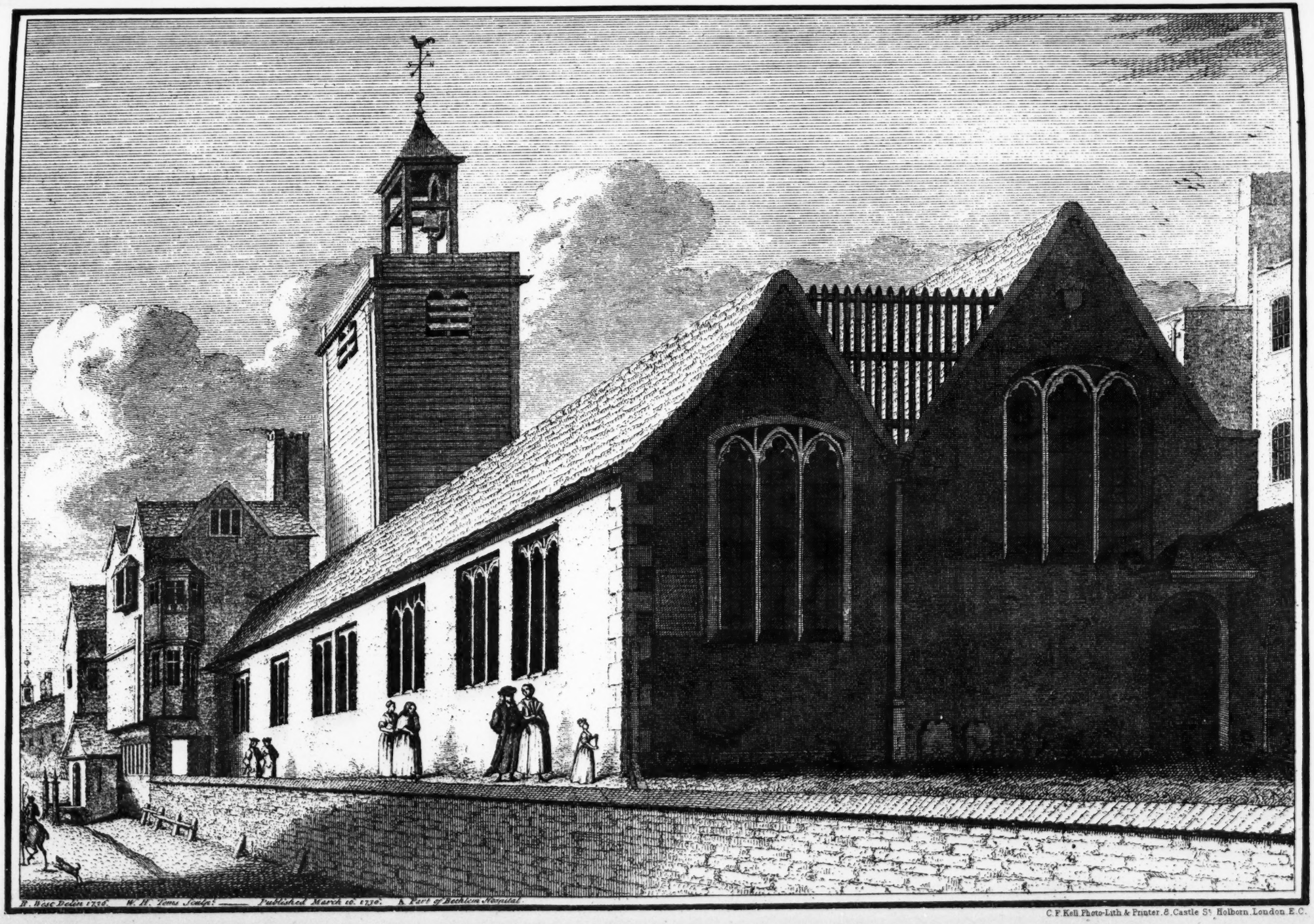
Shops, Gun St, Reading.

W. Ravenscroft. Architect. READING.

SCALE 0 1 2 3 4 5 6 7 8 9 10 20 30 FEET

Wyman & Sons, Photo-Litho

C^t Queen S^t London, W.C.

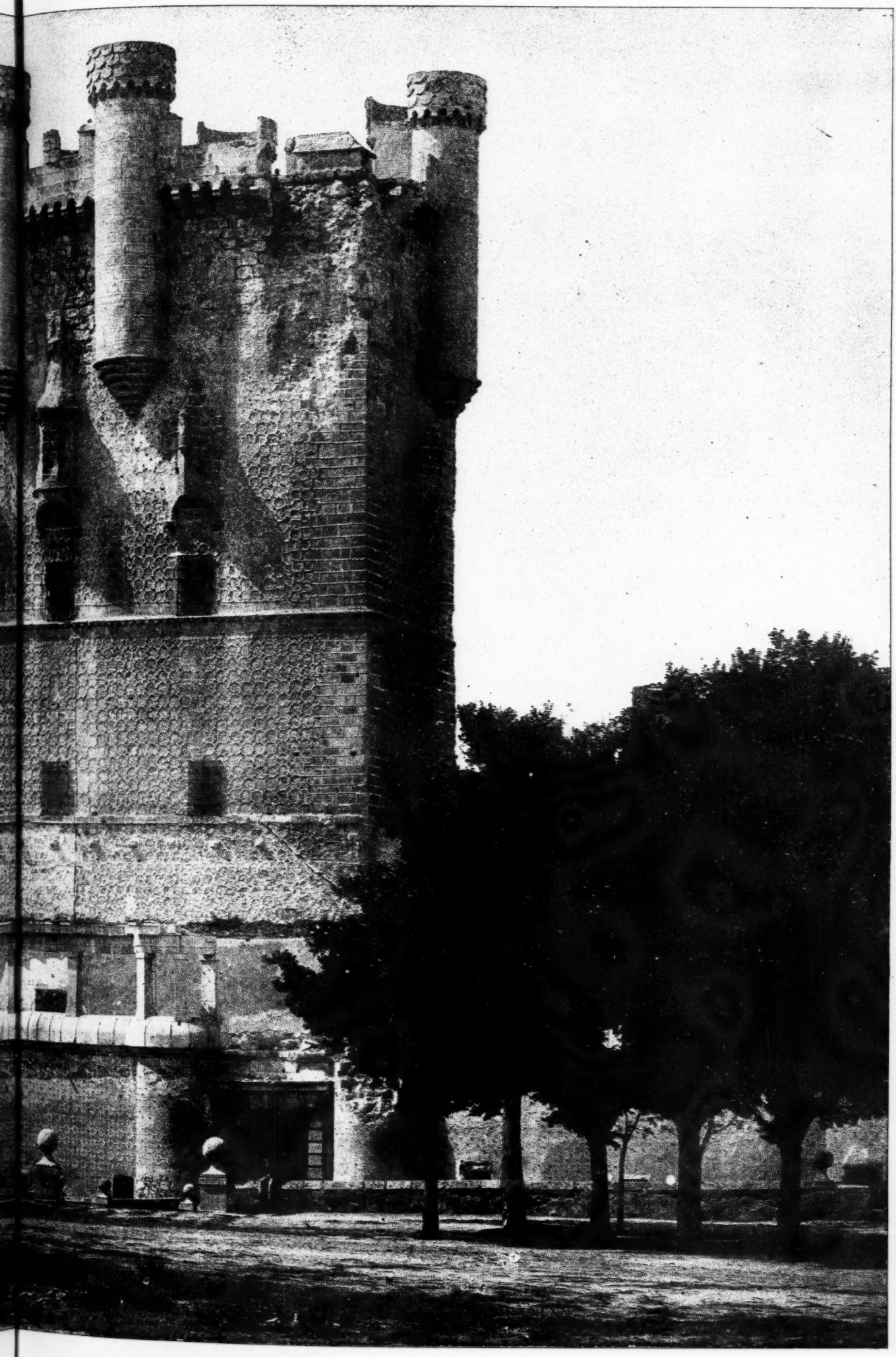


B. Ware Delin 1736. W. H. Toms Sculp. —— *Published March 10. 1736. N. East of Bedlam Hospital.*

C.F. Kell Photo-Lith & Printer, 8, Castle St. Holborn, London, E.C.

OLD LONDON CHURCHES. *All Hallows, London Wall.*

"INK-PHOTO". SPRAGUE & Cº. LONDON.



ZAR. SEGOVIA.

OLD LONDON CHURCHES.

THE two views of Old London Churches are given in connexion with the paper on the subject by Mr. Loftus Brock, part of which is printed in this number [p. 580], and the remainder of which will appear in our next, accompanied by two other views of churches referred to, reproduced, like the present ones, from old engravings.

The view of Allhallows-on-the-Wall is taken from the series of engravings published in 1740, by R. West and W. H. Toms, and engraved by Toms. A tolerably full description of the church from Toms's book was quoted by Mr. Brock, in his paper, and for convenience we transfer it to this portion of our columns:—

"Allhallows-on-the-Wall. This church is so-called as being dedicated to All Saints, and situated on the north side of London, a little easterly from Bethlem Hospital, and is in the ward of Broad-street, but the parish is in the wards of Broad-street, Bishopsgate, and Lime-street. When it was first built I find not, but 220*l.* was laid out on it in the year 1627.

II. It is of the Gothic and Tuscan orders, and not having been consumed by the late Fire, is not so beautiful as those that are wholly new erected.

III. The church being pretty old and not large, the wainscot is not so considerable as some others, but it is well paved, and at the vv. end is a small gallery (whose front is adorned with shields and their compartments), elevated on small columns of the Tuscan order, which was new beautified in the year 1699, at the charge of the parish. At the altar, the Ten Commandments, Lord's Prayer, and Creed are done in black, with Moses on the north and Aaron on the south side of the Decalogue, finely painted, all under a Cornish, in the middle whereof are the Queen's Arms, carved and put up at the charge of the parishioners, and the whole new beautified, in the year 1703. And a little sly. [southerly] from this altar-piece is a piece of antiquity, being the Commandment done in an old character, with glass before them, in a triangular frame, nearly 5 foot high.

4. On the north side of the church is a large table of the benefactors to the poor, well done in gold upon black. Mr. Cromshaw gave 50*l.* Dr. Lewis, the late Rector, 40*l.*, and there are 24 others, many of whom gave near the last-mentioned sum. And close by this table is a very large piece of painting upon Cloth in a strong frame, the Effigies of Queen Elizabeth lying on her Tomb with the Ensigns of Royalty and two golden Lyons, one at her Head, the other at her Feet, which piece was there placed in Memory of that Queen, as being (when alive) a nursing Mother to the Protestant churches.

Upon which piece are these lines:—

'Read but her Reign, The Princess might have been
For Wisdom, call'd Nicaulis, Sheba's Queen.
Against Spain's Holofernes, Judith she,
Dauntless gain'd many a glorious Victory.
Not Deborah did her in Fame excel,
She was a Mother to our Israel;
An Esther, who her Person did engage
To Save her People from the Publick Rage;
Chaste Patroness of true Religion,
In court a saint, in Field an Amazon;
Glorious in Life, deplored in her Death,
She was unparallel'd Elizabeth.

	Yea.	Mo.	Days.
Born anno 1534 } Crowned anno 1558 } Reigned	44	4	17.
Dyed anno 1602.'			

V. The altitude of this church is about 21 foot; its length, 80; and breadth, 26. And the height of the tower is about 50 foot, wherein are 4 bells to ring a peal, besides a small one, which is used to ringing the People to Prayers, and therefore called the Saints bell."

It goes on to give the name of the (then) incumbent, the tithes, the name of the then lecturer, stating that here are prayers every Wednesday, Friday, and holy day at eleven o'clock. It gives the composition of the vestry, mentions the names of the streets, alleys, and courts, and concludes by stating that the number of houses is 300.

St. Dunstan-in-the-West, the other church illustrated, was removed only about fifty years ago. It was taken down to widen Fleet-street, but Mr. Brock states that its foundations are still there.

Cambrian Archæological Society.—This Society will make Newport its headquarters in August next. Lord Tredegar is to be the President, and Mr. T. D. Roberts the local secretary.

ON RENDERING WOOD FOR BUILDING PURPOSES NON-INFLAMMABLE.*

THE rendering of wood for house construction non-inflammable should be a subject of great interest to all. There is, however, little information obtainable from published works, though small hints on the subject may be sometimes met with in encyclopædias, &c. The preservation of wood from rot may be found treated of in several books, which contain also information on the physical construction of timbers, the various preservative solutions, and the methods of injection and impregnation. On all these points full information is necessary to enable us to take a comprehensive view of the matter.

Timber structures are often a necessary evil, either from fear of earthquakes or from scarcity of other material, either for the entire building or for the roofs only. I especially allude to Japan, China, South America, the Southern States of North America, and Jamaica, in which last the roofs are of shingles of willow, a very absorptive wood, and, therefore, easily treated with chemicals for resistance to fire. Let us see, then, how these wooden buildings may be preserved from destruction by fire in the best and cheapest manner, remembering always that though a single house so treated would not blaze, yet if in the midst of a large conflagration it would be carbonised and thus destroyed, so that it would be necessary to have a block of prepared houses together in order to stem the tide of fire in a large timber-built town. This might be done by Government order, by arrangement between the house-owners, or by a fire insurance company. The reduction in insurance rates alone would pay a handsome interest on the first outlay.

Let us, then, pass the various processes in review, with their advantages and disadvantages fully set out, and with their capabilities for preserving textile fabrics as well as timber from fire.

Should it be decided to impregnate the wood with chemicals this can be done, or a superficial coating over the wood may be applied of fire-proof and waterproof paint, or both, though many prefer the internal woodwork plain. Any preservative used in external situations should not be liable to be washed out by the rain. How far those non-inflammable salts which unite chemically with the nitrogenous matter in the wood are capable of resisting wet it is difficult to say with certainty, but there are some, which we shall proceed to give further on, which do effectually resist both water and soap.

Again, it must be a *sine quâ non*" that, whatever the fireproofing material may be, it must be one which, when exposed to the action of fire, does not give off injurious or suffocating smoke.

Also, if the impregnation of the timber is to be thorough, *i.e.*, through the whole of the wood, it would be most advantageously done whilst the wood is green, and the sap uncongealed, otherwise the tubes become clogged, and the injection of the chemicals extends only to a certain depth in the wood if the latter is dry.

Impregnating the timber when green, and operating on large balks, would perhaps be more economical than upon smaller pieces when cut up, but the salts are said to cause shortness of grain, so that it might be difficult with the ordinary hand-saw to cut out the finer kinds of woodwork used for interiors. Lastly, if the woodwork is impregnated when green, the solution acts chemically on the sap, and destroys the germs of rot. Of course, the "shortness" of the wood caused by salts applies to balks, whether prepared when green or well-seasoned.

With regard to the construction of the tree itself, Dr. Boucherie considers that no connexion exists laterally between the vertical sap-bearing tubes, as is shown by applying a coloured solution under a moderate pressure to certain tubes at one end of a felled tree, when the same tubes at the other end of the tree, and only those, become coloured, and a pattern such as the name FARADAY so injected was found perfect at any point of the tree where a cross section was made. Langton, however, points out that "in timber creosoted under pressure the creosote penetrates between 1 in. and 2 in.," showing that there is some lateral connexion, although so slight that if required to be done thoroughly the injection should take place from the ends.

Although the solutions used generally for the preservation of timber from rot need not be the ones best suited for rendering the same fire-proof, yet the methods of application are similar.

The soft woods, such as Scotch pine and spruce, are usually best suited for treatment, their grain being coarse, the annular rings far apart, and the tissue soft and capable of great absorption, rendering them, when prepared, more lasting than closer grained woods, owing to the density of fibre not permitting the latter to be thoroughly impregnated. We are thus enabled to use the cheap quickly-grown woods, the processes for rendering them non-inflammable at once preserving them from rot and from the attacks of insects and worms.

The idea in the ordinary methods adopted for preserving timber from rot is to introduce into the pores of the wood some salt which, uniting chemically with the albumen of the sap, shall convert it into an insoluble compound. The best known of these methods are Burnettising, Kyanising, and Boucherising.

Burnettising consists in impregnating the timber with a solution of chloride of zinc of the strength of one of the salt to thirty parts of water.

Kyanising consists of impregnating with chloride of mercury (corrosive sublimate). The treatment by both these processes consists in immersion in open tanks or more thoroughly by pressure of 110 lb. to 150 lb. to an inch in closed wrought-iron cylinders; but it is questionable whether these methods are so good as Boucherising, as by them it is necessary to force the solution into the wood at right angles to its tubes thereby injuring its strength and letting the sap which is the immediate cause of decay remain, the coagulation of the albumen at any material depth below the surface being a matter of doubt, whilst the cost to obtain even that amount of saturation would, *cæteris paribus*, point to the *Boucherising* method of injection as most suitable to our purpose. In this, newly-cut green timber (coarse-grained is most suitable), before the bark is removed, is exposed at the end (either end will do) to a slight pressure from a liquid column of sulphate of copper (1 lb. of sulphate to 5 gallons of water or 1 to 100 by weight, allowing 0·35 lb. of sulphate to 1 cu. ft. of timber) arranged in a tank 25 ft. to 50 ft. above the level of the log. The liquid drives the sap before it and forms chemical combinations which preserve the wood from decay. The sooner this is done after felling the better, as the resinous substances rapidly harden and prevent the movement of the liquid salt through the pores. The plant required is small and easily erected close to where the wood is cut, and can be quickly shifted to a fresh situation. The time for the appearance of the liquid at the top of the log is from two to twenty-four hours, when it drops into gutters placed to catch it, and is pumped up into the cistern to be used again. About three days are required for a 25 ft. log, and the process is complete when every portion of the top of the log is found to be saturated: this is known to be completed when a brown stain is left on timber by the application of a piece of potassium ferrocyanide. The cost of the process with sulphate of copper is about 2½d. per cube foot for logs 25 ft. long. It has sometimes happened that the heartwood, which is more durable under ordinary circumstances, has, in Boucherised timbers, rotted, leaving the impregnated sap wood. Care should be taken to obtain the sulphate of copper as free as possible from iron, but as it is usually present in some degree it is as well to make a saturated solution, and allow it to remain exposed to the atmosphere as long as possible so as to allow the iron to deposit at the bottom of the vessel, after which it may be diluted. If the solution is too strong it is liable to contract the sap vessels and to crystallise at their ends. The water must be free from lime and perfectly clear. If it contains lime it is as well to add a little sulphuric acid to precipitate it, and either allow it to settle or filter the water through sand, for even the slightest cloudiness interferes with the injection.

All timber when treated by any of the preservative processes in general use becomes "short,"—that is, it breaks in two crosswise easily, and, when impregnated, its tensile strength becomes impaired. It loses when

* A paper by Mr. Thomas M. Rymer-Jones, Memb. Inst.C.E., F.R.G.S., and Mr. John Rymer-Jones, Memb. Inst.Tel.E., read before the Civil and Mechanical Engineers' Society on Wednesday, the 22nd inst.

dry a portion of its elasticity, but regains much of this when in a moist state. The shortness is easily tested, as, on trying to split with an axe a piece of dry preserved timber it will be found that the axe will not follow the grain of the wood. This seems a reason in favour of impregnating the wood, and especially the smaller pieces, after they have been cut and fitted into their several positions. No ungalvanised iron should come in contact with wood impregnated with sulphate of copper (and the same point must be considered when using other salts), otherwise the copper of the solution will be reduced by galvanic action. The sulphur itself is injurious, not only attacking the galvanising of telegraph stay wires, but eating away the iron itself, showing that when salts are used for impregnating wood, some protection, such as paint say, must be used to preserve the iron fixings. Kyanising (chloride of mercury) is equally injurious. Another process of preserving wood from decay is by using borax to neutralise the decaying vegetable matter in the wood. This is also a very good non-inflammable solution.

We have entered thus fully into the methods of preparing wood with chloride of zinc, chloride of mercury, and sulphate of copper in particular, because whatever may be the non-inflammable solution selected as most suitable, some such method of injection will be necessary if the impregnation is required to be other than merely superficial. All these three being salts, will not only preserve the wood from rot, weather, insects, and worms, but will to a certain degree render it non-inflammable; but which solution is best, we shall be better able to judge later on. We may at once put chloride of mercury out of the question, as it is very expensive, and, when burned, is turned into vapour which is fearfully suffocating. Sulphate of copper is cheap, and free from this objection, but turns the wood a bluish colour when the surface is exposed to a damp air. Chloride of zinc and borax, the other two above-mentioned processes, preserve from decay and flame, and might be used for injecting green timber. But at present let us go through the information that can be gathered on the subject of non-inflammable compounds and solutions. Much of this relates to rendering fabrics non-inflammable, and this is done by steeping them in almost any saline solution. Thus, cotton and linen fabrics, prepared with a solution of borax, phosphate of soda, phosphate of ammonia, alum, or sal ammoniac, do not suffer active combustion, nor burst into flame. The salts act by forming a crust of incombustible matter on the surface of the fibres. They do not, however, prevent the carbonisation of the material at a sufficiently high temperature. For ladies' dresses, 1 oz. of alum or sal ammoniac to the last water used to rinse them is sufficient for safety from fire; a less quantity added to the starch would suffice. None of the above are used for fine muslins, as they render the fabric harsh, and destroy its beauty. Sulphate and phosphate of ammonia are efficacious, but interfere with the ironing. The salt which answers all conditions is tungstate of soda: steeped in a solution of 20 per cent. of this salt, muslin is perfectly non-inflammable when dry, and the saline film left on the surface is of a smooth and fatty appearance, like talc, easily ironed and adding a richness to the appearance of the material. The addition of a little phosphoric acid or phosphate of soda to the tungstate is recommended, as without this the tungstate is liable to undergo a chemical change, and become comparatively insoluble. For a solution of tungstate of soda of minimum strength dilute a concentrated solution of neutral tungstate of soda to a specific gravity of 1·14, and then add 3 per cent. of phosphate of soda. This solution is found to keep and answer its purpose well.*

Hatfield.—On the 10th inst. a public hall,—a present to the town of Hatfield from the Marquis of Salisbury,—was opened by Lord Robert Cecil. The hall is a building in the Queen Anne style, of red brick, with moulded terra-cotta ornaments. A portion has been fitted up and let as a restaurant, while another part has been converted into a Conservative club. In the remaining portion are two reading-rooms and a billiard-room, which are to be public, while a hall above is for entertainments. The building, which cost 2,000*l.*, is from plans by Mr. S. W. Shillitoe, of Hatfield.

* To be continued.

COMPETITIONS.

Proposed New Infirmary, Workington.—The plans submitted by Mr. Geo. Dale Oliver, of Carlisle and Workington, for the new Infirmary to be built at Workington, have been selected by the building committee. At a meeting of the Infirmary Committee held last week it was decided to adopt the plans recommended by the building committee, and Mr. Oliver was instructed to prepare working plans and specifications and get in tenders without delay.

Longton Board Schools.—The Longton School Board, having invited plans for two sets of schools at Normacott and Florence, each to accommodate 700 scholars, twenty-three sets of plans were sent in for the Normacott School, and eighteen sets for the Florence Schools. No professional referee was appointed. We are informed that the successful competitors were—For Normacott, Mr. T. P. Hulse, of Longton (motto "Education"); and for Florence, M. John Taylor, of Longton (motto "Fairplay").

ARTISTS' BENEVOLENT FUND.

THE 76th anniversary dinner of the Artists' Benevolent Fund was held on Wednesday at the Freemasons' Tavern, Viscount Hardinge presiding. In proposing the toast of the evening, "Prosperity to the Artists' Benevolent Fund," the Chairman said that during the past year 54 widows and 14 orphans had received annuities, amounting in all to 1,146*l.*, and since the institution of the society 48,000*l.* had been distributed in relieving widows and orphans of artists whose circumstances rendered assistance necessary. He pleaded for increased support to the fund, so that the amounts of the annuities might be increased, and eloquently urged the claims of artists upon the public, who, however, were often so capricious as to disregard the merits of men who had deservedly made a name as artists.

The Rt. Hon. A. J. B. Beresford-Hope (President of the society), whose name was coupled with the toast, in responding dwelt upon the influence exercised by the artist, who, in the pursuit of his profession helped to civilise, to delight, and to elevate all that was human. Mr. Beresford Hope concluded by proposing the health of the Chairman.

Viscount Hardinge having briefly replied, the Secretary announced subscriptions (including 100 guineas from the Queen) amounting to nearly 500*l.*

Mr. Coomber, C.M.G., of Sydney, New South Wales, in proposing the toast of the Royal Academy, referred to the growing appreciation of art in Australia. Mr. C. B. Birch, A.R.A., replied.

Among the other toasts was, "The Artists' Annuity Fund," proposed by Mr. Forbes-Robertson and responded to by Mr. T. H. Maguire, who eulogised the services rendered to the public by the artists of the pictorial press in recent wars. Unarmed, except with pencil and sketchbook, those artists braved the dangers of the battle-field in order that people at home might be able to realise the gallant deeds of our forces in action.

HEREFORD SEWERAGE WORKS.

THE Hereford Town Council, at their meeting a few days since, increased the salary of the city engineer (Mr. John Parker) by 100*l.* per annum from the 1st January last, in consideration of the extra work performed by him in the preparation of the plans and bills of quantities of the proposed new sewerage works, the estimated cost of which is 20,000*l.* At the same meeting it was also resolved to allow him an extra assistant during the progress of the works.

Six miles of new outfall sewers will be required, and there will be erected at the pumping-station engine and boiler houses, sludge-pressing room, coal and lime stores, &c., in addition to a covered reservoir to contain 550,000 gallons.

The average quantity to be treated will be 1¼ million gallons per day, and the settling-tanks have a united surface-area of 15,000 ft., the precipitating agents being lime and other chemicals. The effluent water will be further purified after leaving the tanks by being passed over a limited area of land, which will, for that purpose, be deeply under-drained. Eleven acres have already been purchased.

The sludge, which has ever been the bane of all defœcation works as well as sewage farms, will gravitate by an underground conduit to a covered tank, and thence will be conveyed by compressed air to two of Johnson's sludge-presses, which will at once deprive the sludge of 88 per cent. of its water,—the water passing back to the tanks for re-treatment. The residue will consist of pressed cakes, practically inodorous, and reduced to such a condition that it can be disposed of without nuisance to the neighbourhood on farms, upon which it will be used as manure, the sludge difficulty being in this way, at small cost, reduced to a minimum.

The contracts will be let in May, and the whole work is intended to be completed by the end of 1886.

Owing to an extensive bed of clean gravel underlying the site at a few feet below the surface, concrete will enter largely into the construction of the storage reservoir, the tanks, and other portions of the buildings.

There will be provided horizontal expansive condensing engines, with cylinders 16 in. diameter by 33 in. stroke, each driving 15 in. centrifugal pumps, vats, &c., the steam being generated by a pair of Galloway's steel boilers, 18 ft. by 6 ft. each.

A LAUDABLE EXPERIMENT.

ON Monday afternoon last the new coffee tavern and workmen's dwellings erected by Messrs. Chubb in connexion with their works, Glengall-road, Old Kent-road, London, S.E., were formally opened by the Earl of Harrowby, acting for the Earl of Shaftesbury, who was prevented from attending by indisposition.

The buildings have been designed by Mr. E. Hoole, F.R.I.B.A., and consist of a large hall, coffee tavern, reading-room, kitchen, and retiring-rooms upon the ground floor. Above, three floors of dwellings have been constructed, consisting chiefly of single rooms, so grouped that they can be combined without alteration into two-roomed, three-roomed, or four-roomed tenements, according to the various requirements of the families inhabiting them. Water is obtainable, and a laundry is provided, on each floor; the flat roof furnishes an ample drying-ground. The various floors are reached by York stone staircases and landings, giving access to galleries situated behind an arcade of lofty arches, thus forming an airy verandah to each set of rooms. Every tenement is furnished with coal-bin, cupboard, and cooking-range.

Returning to the ground floor, the hall, named the Queen's Hall, is capacious enough to hold 300 people when used for meetings and concerts, and in the daytime it will afford dining accommodation for half that number; it has a daïs at its upper end which will be serviceable when the hall is used for meetings or entertainments. The hall is 88 ft. in length, 28 ft. in width, and 16 ft. in height. Above the dado the walls are of red brick, with panels of plaster, upon which are some clever silhouettes, designed and executed by Mr. James Allen, the subjects being illustrative of agriculture, the working of metals, &c. A panelled ceiling in pine completes the interior, which is lighted by a lofty range of semi-circular windows. The coffee tavern, which is immediately opposite the principal entrance, can be used in combination with the hall or not as may be desired. The reading-room, stocked with newspapers and other current literature, will, no doubt, prove very popular. The floors of the hall, reading-room, and coffee-bar have been laid with Mr. Roger L. Lowe's (of Farnworth) wood block-flooring. Provision is made for the extension of the buildings when necessary. The erection of this building was not undertaken before the firm had had a conference with the workpeople, and ascertained their wishes on the subject, and the management of the hall and coffee tavern will be intrusted to a committee of the *employés*. These premises, too, will be available for use by workpeople employed in other factories, and by residents in the neighbourhood. The various clubs and classes already formed in connexion with the works will, in future, have their headquarters in the new building.

Sir Richard Cross was amongst the speakers, and he suggested that the City livery companies would do well to devote some of their wealth in the provision of better dwellings for

the poor. It was also suggested by more than one speaker who took part in the proceedings that the laudable example now set by Messrs. Chubb might very well be copied by other large employers of labour.

An inspection of the large works (covering two acres of ground) followed, and much that was of interest to the visitors was to be seen. Among the jobs in hand is a large strong room for the National Bank of Scotland.

LINE OF FRONTAGE.

WILLIAM ELLIS was summoned at the Wandsworth Police-court by the Wandsworth District Board for builning beyond the general line of frontage at St. John's Hill, Wandsworth, contrary to the 75th section of 25 & 26 Vic., cap. 102.

Mr. Young, solicitor, appeared in support; and Mr. Sheppard defended.

Mr. Pilditch, the Board's Surveyor, produced the plan of the Superintending Architect, showing the line. He said the building, which was a shop front, projected 3 ft. 10 in. beyond it.

Mr. Sheppard called attention to a plan, and said there were bay-windows, but the shop-front did not project beyond them.

Mr. Shiel said the certificate of the Superintending Architect was conclusive. He made an order for so much of the building as projected beyond the line to be pulled down, and also ordered the defendant to pay 5*l.* 5s. costs.

ANCIENT LIGHTS.

IN the Supreme Court, before Mr. Justice Day, the case of Crosby and Others *v.* The Glengall Workmen's Coffee Palace Co. and Another has been heard.

This was an action by the trustees of a Primitive Methodist Chapel in Manchester-road, Poplar, for an injunction to restrain the defendant Company and the builder employed by them from building on a piece of land adjoining the chapel so as to obstruct the ancient lights of the chapel and the schoolroom beneath it.

The wall of the building complained of had already reached a height at which it was alleged to darken the schoolroom windows, and an interim injunction was granted a year ago to prevent it being carried any higher. The rights of the plaintiffs were admitted, and the only question at issue was whether or not the plaintiffs' light was substantially interferred with, or would be so when the wall was completed. The evidence was of the usual character in such cases, but the defendants endeavoured specially to rely upon the fact that it was intended to face the wall in question with glazed bricks, by which means any loss of direct light would be, to some extent at least, compensated by reflection, and counsel also contended that the question whether or not the diminution of light was substantial must be decided with reference to the use to which the schoolroom was put, classes being held there only twice on Sundays, and the defendants being willing to undertake not to carry the wall any higher nor to injure the chapel itself.

Mr. Justice Day, in giving judgment, held that the lights had been interfered with, and that the plaintiffs were entitled to the relief they asked for, and gave judgment accordingly withcosts.

THE EARL OF HARRINGTON *v.* THE BUILDING SECURITIES COMPANY.

A MOTION for an interim injunction to restrain the defendants from continuing to build the Avenue Hotel, Northumberland-avenue, was heard before Mr. Justice Pearson, and the injunction was granted.

The surveyors on behalf of the plaintiff were Mr. Thomas Edward Collcutt and Mr. Banister Fletcher. The counsel were Mr. Cozens Hardy, Q.C., and Mr. E. F. Buckley.

COOKING APPARATUS FOR LARGE INSTITUTIONS.

SIR,—I observe in your last issue [p. 566] an illustration of a "patent" cooking apparatus recently fitted up at the St. Pancras Workhouse. I herewith beg to enclose the contract drawing of an almost identical apparatus designed by me (upon Captain Warren's principle) in 1872, which I fitted up at the new Lambeth Workhouse in 1873, and which has been at work there ever since. I am about to fit up similar apparatus at the new workhouse for the Wandsworth and Clapham Union, and at the extension of the workhouse and infirmary of the parish of St. George-in-the-East.

THOS. W. ALDWINCKLE.

2, *East India Avenue, E.C.*
April 23rd.

Board of Trade Surveyors.—The name of Mr. T. Chatfeild Clarke, 63, Bishopsgate-street Within, has been placed on the Board of Trade list of surveyors and umpires.

SOANE MEDALLION.

SIR,—The proofs of my drawing have just reached me.

I felt much surprise and disappointment on seeing the failure of the photo-lithograph of my drawing in your paper; but it was with much greater surprise that I read your remarks in explanation of the failure.

You must be perfectly aware that the drawings were not made with a view to reproduction as photo-lithographs, and that photo-lithography is not, and never can be, the aim or the standard of such work. If the failure was unintentional and not anticipated, ought you not to have stopped the publication of the drawing altogether instead of endeavouring to throw upon me the responsibility of what was really the fault of the process employed? If, on the other hand, your original object was to illustrate the unsuitability of photo-lithography for a particular style of work, was it generous, or even consistent with common fairness, to apply for my drawings for publication under the pretence that they were to appear as ordinary illustrations, and without the slightest warning that they would be exhibited as a terrible example of what a drawing intended for photo-lithography ought not to be?

JOHN THOMSON.

*** Mr. Thomson takes us a little too seriously, and is quite mistaken in supposing there was any "pretence" in the matter. We wished to give a good representation of his drawings, and found his method had rendered it impossible. As before said, we think the method itself a bad one; not true "line-drawing." Our experience is that the best line-drawings are also those which photolithograph best. But we did not call Mr. Thomson's drawings a "terrible example" or an "awful warning"; we only said "unfortunate,"—both for ourselves and him.

RECENT SALES OF PROPERTY.

ESTATE EXCHANGE REPORT.

APRIL 13.

C. D. FIELD & SONS.

Bermondsey—Nos. 54, 56, and 58, Tanner-street, freehold	£1,025
Peckham—2 to 8 even, Ansdell-road, 88 years, ground-rent 16*l.*	1,055
Rotherhithe—20, 22, and 34, Swan-lane, freehold	610
40, Swan-lane; and 90 and 92, Albion-street, freehold	280
80, Rotherhithe-street, freehold	260
Brixton—17, Bonham-road, 82 years, ground-rent 7*l.* 10s.	430

By BEARD & SON.

Bayswater—2, Monmouth-road, 35 years, ground-rent 7*l.* 15s.	525

By G. A. BICKERTON.

Stoke Newington—41, Kynaston-road, 90 years, ground-rent 6*l.*	300

By WALFORD & WILSHIN.

Beckenham—1 and 3, Thesiger-road, freehold	690

APRIL 14.

By C. DAVENPORT.

One Third Share in the Hoxton House Lunatic Asylum, comprising freehold and leasehold houses, &c.	900

By H. N. NEWTON & CO.

Oxford-street—The lease of No. 4, term 9½ years	1,450

By DEBENHAM, TEWSON, FARMER, & BRIDGEWATER.

Clerkenwell—10 and 11, Arlington-street, 26 years, ground-rent 12*l.* 12s.	640

By ROGERS, CHAPMAN, & THOMAS.

Belgravia—3, Eccleston Houses, 39 years, ground-rent 14*l.*	2,100
Lower Norwood—Ground-rents of 36*l.* a year, reversion in 82 years	745

By FLEURET & SON.

Pall Mall—6 and 19, Crown-court, freehold	2,500

By A. CHANCELLOR.

Hemel Hempstead—Two copyhold houses, with shops	750

By HARDS, VAUGHAN, & JENKINSON.

Commercial-road, E.—35, Caroline-street, freehold	490

By F. JOLLY & CO.

South Hackney—71, Lauriston-road, 57 years, ground-rent 6*l.* 10s.	650
75 and 77, Lauriston-road, 57 years, ground-rent 13*l.*	1,000

APRIL 15.

By H. A. COX.

King's-cross—3 and 4, Canal-terrace, 57 years, ground-rent 8*l.*	575
Bermondsey—21 and 23, Anchor-street, 77 years, ground-rent 8*l.*	575

By HOBSON, RICHARDS, & CO.

Hackney—The Residence, "Brunswick House," 81 years, ground-rent 2*d.*	1,000
Acton—6, Essex-road, freehold	500

By E. W. RICHARDSON.

Old Ford—4, Sutherland-road, freehold	350

By HUMPHREYS, SKITT, & HUMPHREYS.

Old Kent-road—36, 38, and 40, Kender-street, freehold	810
1 to 3, Kender-grove, freehold, and a ground-rent of 4*l.* a year	650
East Greenwich—42, Warldridge-street, 33 years, ground-rent 2*l.*	120

APRIL 16.

By WALFORD & WILSHIN.

Anerley, Croydon-road—The Freehold Residence, "Chesswood House"	2,110
Anerley-road—Ground-rents of 80*l.* a year, reversion in 94 years	2,070
Stodart-road—Ground-rents of 21*l.* a year, reversion in 94 years	545

By J. & R. KEMP & CO.

Camden Town—120, Arlington-road, freehold	900

By F. LEWIS & CO.

Soho—160, Wardour-street, 45 years, ground-rent 18*l.* 17s.	£410
14, Carlisle-street, a profit rental of 40*l.* a year, term 7 years	160

By INMAN, SHARP, & HARRINGTON.

Commercial-road, E.—21, Lucas-street, 7 years, ground-rent 5*l.*	45

By NEWBON & HARDING.

Notting-hill — 132 to 142 even, Portland-road, 67 years, ground-rent 10*l.*	810
Holloway—1, Shakespeare-terrace, "The Lamb" Beer House, freehold	700
2 and 3, Shakespeare-terrace, freehold	2,530
7 and 8, Nicholay-terrace, freehold	620
2, Grenville-place, freehold	720
Hornsey-road—43, Regina-road, freehold	420
Highbury-crescent—No. 18, term 58 years, ground-rent 15*l.*, with the reversion	2,600

APRIL 16.

By GLASIER & SONS.

Portland-place—28, Weymouth-street, 25 years, ground-rent 64*l.*	1,520
Putney—117, High-street, 83 years, ground-rent 20*l.*	1,810
83, High-street, 89 years, ground-rent 16*l.*	1,910

APRIL 17.

By MURRELL & SCOBELL.

West Smithfield, Peter's-lane—A freehold site, area 4,735 ft.	3,000
Bedford-row—8, Henry-street, 14 years, ground-rent 5*l.* 5s.	200

By CRISPIN, MOORE, & HOLLEBONE.

Piccadilly—No. 199, a profit rental of 225*l.* a year for 17 years	1,810
Leatherhead—3, Swiss Cottages, freehold	280
9 and 10, Poplar-road, freehold	390

By BAKER & SONS.

Chelmsford, near—Chalk's Farm, containing 135a. 0r. 6p., freehold	1,200
Tilbury, near—Part of "Brickhouse Farm," 81a. 0r. 17p., freehold	3,200
An enclosure of land, 54a. 3r. 30p., freehold	3,750
An enclosure of land, 94a. 3r. 17p., freehold	1,400
Enclosures of land, 99a. 0r. 20p., freehold	3,115

By W. B. HALLETT.

Battersea—22 and 24, Granfield-street, 95 years, ground-rent 10*l.*	280
King's cross—10 and 12, Wynford-road, 39 years, ground-rent 44*l.*	200

The Student's Column.

DESCRIPTIVE GEOMETRY.—XII.

Find the distance which separates two parallel planes P *and* Q.

WE simply intersect them by an auxiliary plane, R, perpendicular to their horizontal traces; $\alpha\ \beta$ is the length required. (See fig. 61.)

Find the distance between two straight lines A *and* B *not in the same plane.*

The direct method of solving this problem is as shown in sketch, fig. 62. We carry through a point c of A a line D parallel to B. Through the lines D and A we carry the plane P. Through any point e of B we draw the line F perpendicular to the plane P, and through the point g, where the line F meets the plane, P, we make line I parallel to B; we get thereby the point m on the line A, and then the line K, parallel to F, gives us $m\ r$, the shortest line between A and B.

Nothing looks less formidable than the above sketch. We draw the above operations in plan and elevation below, and behold what a complex network of lines. (See fig. 63.)

As an exercise of drawing, the student could not do better than solve this problem as above, but in practice we shall want something simpler.

Second Solution.—We draw through the lines A and B two parallel planes, P and Q. For this, through a point d of the line A, we make a line C parallel to the line B; we get thereby P^A, the trace of the plane which contains the lines A and C; as for Q^A, trace of the plane which contains the line B, it is parallel to P^A, and we find the distance of the plans P and Q, as we have done before, $\alpha\ \beta$ is the distance they are apart, and it is also the distance required of the lines A and B. (See fig. 64.)

Third Solution.—We change the planes of elevation and plan so that A, one of the lines, be perpendicular to the plan. The plan of the line will then be a point A^{A11}, and the distance from that point, A^{A11} to B^{A11}, new plan of B, will be the distance required. (See fig. 65.)

Fourth Solution.—Here, as in the former solution, we get the projection of the lines on a plane, P, perpendicular to the line A, but, instead of carrying this out by changing the projection planes, we find at once the projections of both lines on the plane P, and turn down that plane with the projections it contains, so as to measure the distance required.

According to our system of notation, we indicate in this drawing the projections on the plane P, after turning it down by the sign ^{P};

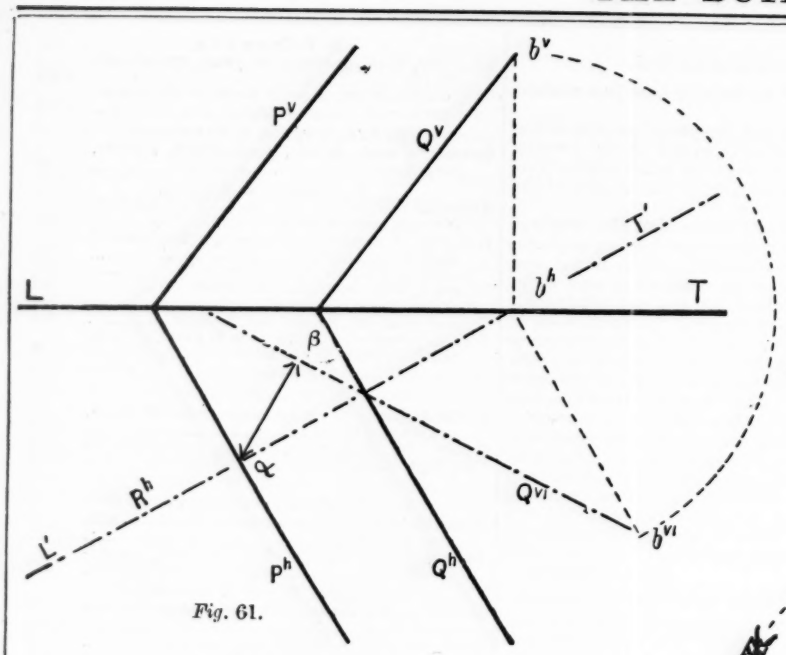


Fig. 61.

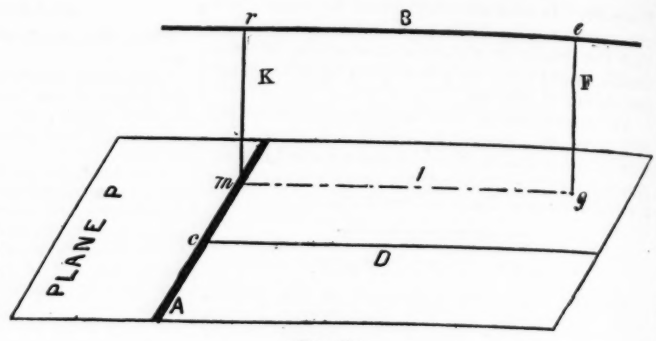


Fig. 62.

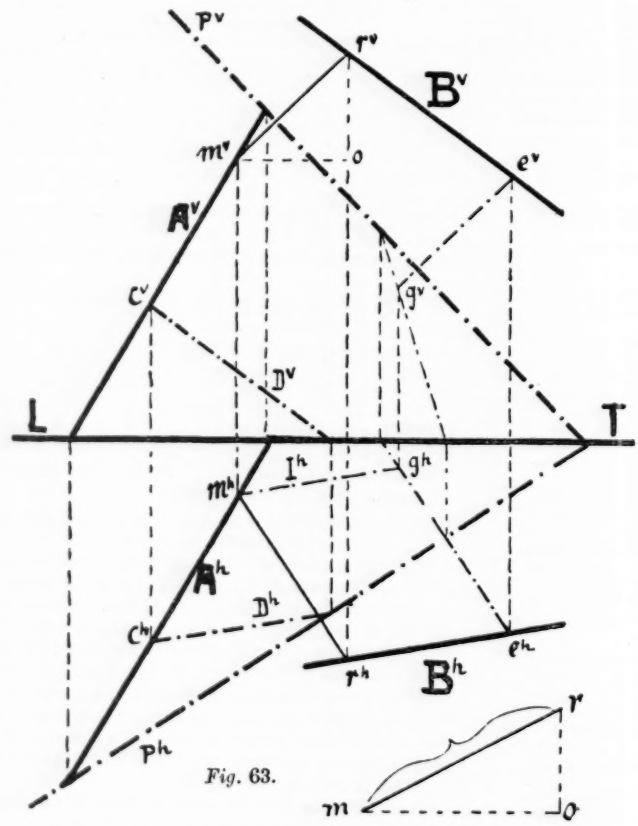


Fig. 63.

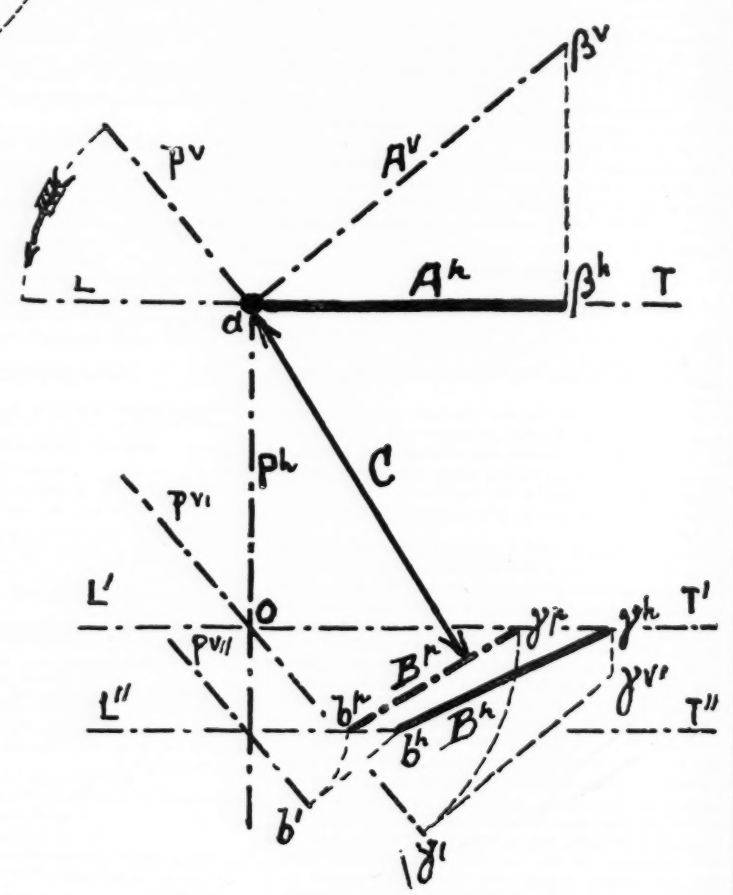


Fig. 66.

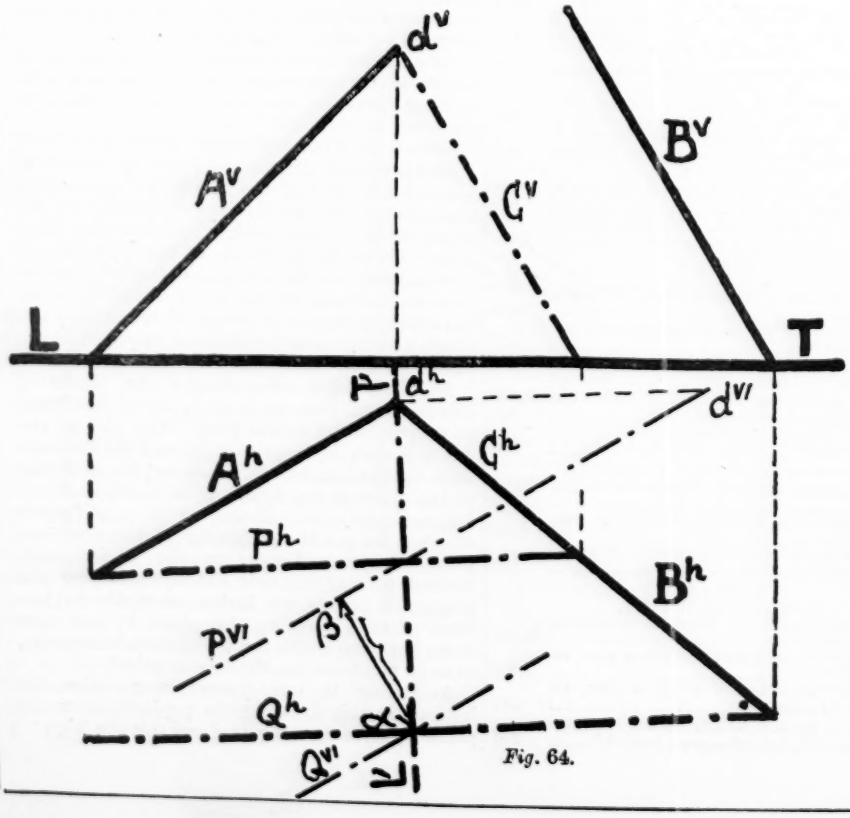


Fig. 64.

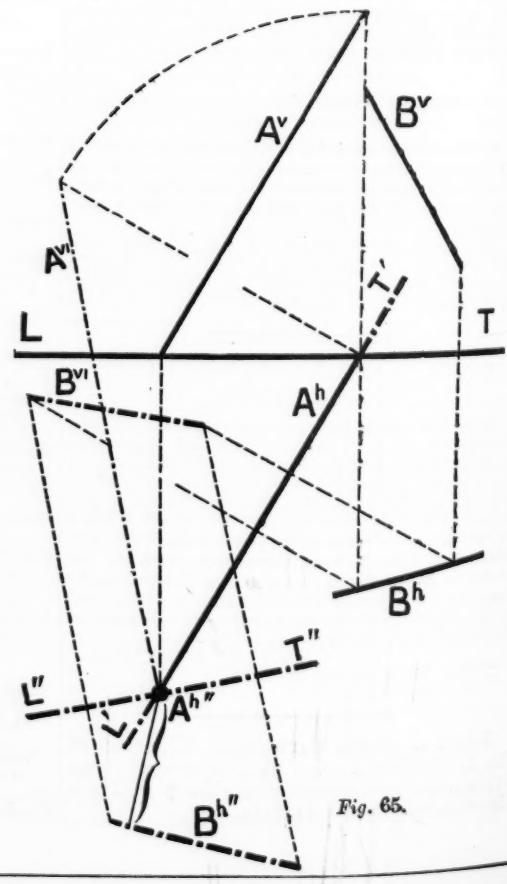


Fig. 65.

for instance, B^p is the projection of the line B on the plane P.

In fig. 66 the lines A and B are given by their planes A^h and B^h, their horizontal traces *a* and *b* and the height of a point of each such as B^h B^v on the line A and γ^h γ^{v1} on the line B. If we make an elevation, and take our ground-line L T on A^h, the elevation plane contains the line A itself, which is identical with A^v; therefore the plane P perpendicular to the line A will have its vertical trace P^v perpendicular to A^v, and its horizontal trace P^h will be perpendicular to A^h. The whole of the line A is projected on the plane P in one point, *a*. To find the projection B^p of the line B we get the projections γ^p and b^p of two of its points as follows. We make an elevation on a plane parallel to our first elevation, and containing the point γ; such is the one on L^1 T^1. We see by the figure that P^{v1} is then parallel to P^v, and from γ^{v1}, the real position of the point γ, we draw a perpendicular to P^{v1}, which gives us the point γ^1. When we turn down the plan P, the point γ^1 comes to γ^p by describing the arc of a circle of centre O. By a similar operation on the line L^{11} T^{11} we get b^h, and thereby B^p, the line C perpendicular from the point *a* to B^p is the distance required. Note that in our drawing the point γ is situated below the plane of the plan, for γ^{v1} is below L^1 T^1.

MEETINGS.

SATURDAY, APRIL 25.

Architectural Association.—Visit to the Church of St. Bartholomew-the-Great, West Smithfield. 3 p.m.

Association of Municipal and Sanitary Engineers.—Lancashire and Cheshire District Meeting at Burnley. 11.30 a.m.

MONDAY, APRIL 27.

Society of Arts (Cantor Lectures).—Captain Abney, F.R.S., on "Photography and the Spectroscope." II. 8 p.m.

University College.—Mr. Barclay V. Head on "Greek Numismatics." II. 4 p.m.

TUESDAY, APRIL 28.

Art Union of London.—General Meeting and Prize Distribution; Adelphi Theatre. 12 Noon.

Institution of Civil Engineers.—Special General Meeting of Corporate Members only, "To decide upon Proposed Alterations in the By-laws." 3 30 p.m. At the Ordinary Meeting, at 8 p.m., Professor H. S. Hele Shaw will read a paper on "Mechanical Integrators."

WEDNESDAY, APRIL 29.

Institution of Civil Engineers.—Annual Dinner in the Conservatory at the Horticultural Gardens (Inventions Exhibition). 6.30 p.m.

THURSDAY, APRIL 30.

Society for the Encouragement of the Fine Arts.—Mr. W. Cave Thomas on "The New Æsthetics." 8 p.m.

Society of Antiquaries.—8.30 p.m.

Institution of Mechanical Engineers.—Ordinary General Meeting. 3.30 p.m.

FRIDAY, MAY 1.

Lincoln Diocesan Architectural Society.—Bi-monthly meeting.

Institution of Mechanical Engineers.—Ordinary General Meeting continued. 7.30 p.m.

SATURDAY, MAY 2.

Edinburgh Architectural Association.—Visit to Ravenscraig, Kirkaldy, and Dysart House.

Miscellanea.

Birmingham Architectural Association. The eighth ordinary meeting of this Association for the current session was held at Queen's College on Tuesday evening last. The Vice-President, Mr. W. H. Kendrick, was in the chair. A paper was read by Mr. A. Reading, on "A Comparison between English and Continental Renaissance Architecture." The lecturer, with the aid of a powerful lantern, illustrated his remarks by views of some of the most important Renaissance buildings abroad and at home, and pointed out the successive waves of Renaissance expression, which differed very materially according to the country in which it was practised. The lecturer urged all admirers of this style to study the Early Italian Renaissance, as it was only to be found in that country in its simplicity and purity, and further strongly advocated, where the style was adopted in this country, the advisability of following in the steps of the Italians, and drawing from the pure Classic of ancient Greece and Rome, and adapting their forms to modern requirements, and thus in time forming a pure Renaissance of our own. A hearty vote of thanks, proposed by Mr. H. H. McConnal, and supported by Mr. Victor Scruton (hon. sec.), and the Vice-President, was unanimously accorded to Mr. Reading for his interesting paper. After a brief response from the author, the meeting terminated.

British Archæological Association.—At the meeting of this Association on the 15th inst., Mr. Thos. Morgan, F.S.A., in the chair, three crucifixes of thirteenth-century date were exhibited by Mr. W. H. Rylands. One of these was enamelled and set with turquoises and garnets, the others were enamelled, with blue colouring, similar to Limoges workmanship. A small representative collection of Persian art pottery was described by the Rev. S. M. Mayhew, some of the articles being of great interest and beauty. Mr. F. Brent, F.S.A., exhibited a bell of the time of Elizabeth, and, among other objects, an ancient triptych of Russian workmanship, from the Crimea, which was commented upon by Mr. Hodgetts. Mr. H. Watling sent a series of drawings of remarkable antiquarian objects, including a series of representations of St. Edmund, king and martyr, from churches in East Anglia; stained glass in Blythborough Church; and of the curious pewter vessels of Puritan times used in the Holy Communion at Imham Church. Mr. J. Willson described another of the Saxon crosses of which so many have been recently reported to the Association. It is in Hackthorne Church, and consists of a Latin cross incised on a large block of stone, the edges of the latter being ornamented with a cable moulding. Mr. Loftus Brock, F.S.A., exhibited three or four fragments of marble statues from Rome, including an arm of a Cupid, of excellent workmanship. A paper was then read by Mr. Maunde Thompson, F.S.A., on a hitherto unnoticed Saxon vocabulary compiled by Abbot Ælfric. It occurs on the margin of a Latin manuscript in the British Museum, written in a French hand of the tenth century. The Saxon words are neatly written, and of these fully forty in number do not appear in Anglo-Saxon dictionaries. An animated discussion took place, in which Messrs. Rylands, De Grey Birch, Hodgetts, and others took part.

Southampton.—The foundation-stone of the new Clubhouse for the Royal Southampton Yacht Club was laid on the 9th inst. The building will occupy a site on the west side of Above Bar-street, at its junction with Ogle-road and Manchester-street, thus giving the building frontages to three roads. The site contains in area about 4,400 square feet, and will be almost entirely occupied by the new buildings, a small space only being reserved in the rear for light and air to the south side, and the three principal fronts being kept back from the boundaries, but with sufficient space to admit of a broken outline, areas, &c. The space between the boundaries and the building is to be paved with tiles and fenced in with a low ornamental iron railing. The building will be three stories in height, besides basement, and is to be faced with dark red local bricks, pointed with black mortar, the dressings being executed in red terra-cotta. The roof will be covered with slates, the ridges being furnished with crested-tile capping, with ornamental termination to gables and hips. The design is Domestic Gothic in character. The contractors for the whole of the works are Messrs. John Crook & Sons, of York Building Works, Southampton, the terra-cotta work being supplied by Mr. J. C. Edwards, of Ruabon. Mr. W. H. Mitchell, of Portland-street, Southampton, is the architect.

The Employers' Liability Assurance Corporation (Limited).—The fourth annual report of the directors, to be presented at the annual meeting to be held on the 30th inst., states that though during the year the depression of trade has been intensified, and there has been no abatement in the severity of competition, the directors have continued to uphold rates, and they report a further increase of premium income, which now stands at 70,210*l*. The net unearned premiums, 21,999*l*. are reserved. After due provision for this and all charges there remains a balance of 5,737*l*. 19s. 7d., out of which the directors recommend a dividend of 2s. 3d. per share.

Death of Mr. Ansdell, R.A.—Mr. Richard Ansdell, the well-known animal painter, died on Monday morning at his residence, Farnborough, Hants, from bronchitis, after three days' illness. He was seventy years of age. He was a native of Liverpool, and was educated at the Bluecoat School there. He was elected a Royal Academician in 1870.

Moscow.—A new and large Anglican church, of considerable architectural importance, has just been completed and opened at Moscow.

Swanage.—A new railway is about to be opened to Swanage, eleven miles from Wareham, and 125 miles from London, on the South-Western Railway. Swanage is a small, old-fashioned, stone-built town on the eastern coast of Dorsetshire, and promises to be a flourishing watering-place. It has a good bay and sands. The present town lies in a hollow between high sheltering hills, almost rivalling some of those in Wales, one side of the coast being entirely rockbound, and numerous legends exist of King Alfred, the Danes, and a spirit called "The Darl," which was supposed to inhabit the caverns in the rock now known as Darlston Head. Of late years Swanage has been reached by steamer from Bournemouth, which is about eight miles distant, the land route being twenty-five miles. It has a church with fine old pre-Norman tower, a new town-hall, of which the façade (an old one) was brought from London; an Institute, handsomely endowed by private generosity; a good hotel, at which Queen Victoria once stayed when young; and several other handsome buildings, public and private. The streets are quaint and in parts very narrow, all the buildings being of the native limestone. Corfe Castle, of historical renown, where is constructed a station on the new railway, is distant five miles. Swanage, hitherto difficult of access, has for years been the favourite resort of those few who were aware of its attractions and in search of retirement and repose. In the *Builder* for August 25, 1883, will be found an article entitled "The Fortune of Secluded Swanage," in which the aspects of the watering-place, present and future, are discussed at some length.

The East-End Dwellings Company.—The second ordinary general meeting of the East-End Dwellings Company was held on Monday last at Toynbee Hall, Commercial-street, Whitechapel, under the presidency of Mr. Edward Bond. The chairman, in moving the adoption of the report, said that the block of buildings in Cartwright-street, which had recently been opened, contained 281 rooms, of which 167 had been let, 66 of which were occupied by tenants who had only one room. It would be remembered by those who were concerned in the early history of the company, that they looked forward to letting a number of their rooms to tenants of single rooms. He thought that they had every reason to be pleased with the way the buildings in Cartwright-street had been carried out. They were not so unsightly as he expected in consequence of their desire to exercise economy. Mr. Crowder seconded the motion. In reply to a shareholder, the chairman said that unless there was a further application for shares they would have to call up more capital, but that would not be for four months yet. Mr. Rawlinson stated that there had been an enormous number of applications for single rooms rented at 1s. 6d. and 1s. 9d. to 2s., and it would be desirable to keep that in view when they erected their fresh block. The chairman said the suggestion would be taken into consideration by the Board. The motion was carried. [We gave some account of the operations of this company in our issue of March 28 last, when we published plans, sections, and elevations of the Cartwright-street buildings.]

The Temple Church, London.—This interesting old church has lately been enriched by a stained-glass window in memory of the last acting Master in Chancery, Mr. Charles Beavan, M.A. It consists of three lights, is on the north side next to the organ, and contains as subjects seven miracles of our Lord in medallions as follows:—The sight of the man who was born blind restored; the nobleman's son cured; the widow's son raised to life; the lame man at the Pool of Bethesda healed; the demoniac boy cured; the woman with the issue of blood healed; and the ten lepers cleansed. The general ground-work of the window is formed of geometrical bands of colour and scroll ornament of tinted white glass. The window was executed by Messrs. Ward & Hughes, of Frith-street, Soho-square.

An Odd Fellows' Hall was opened at Hythe on the 9th inst. The building has been designed and erected by Mr. W. J. Martell, of Hythe, and with the site has cost about 600*l*. It is built with red brick with stone dressings, and bears over the doorway a stone on which is inscribed the name of the hall. There are two rooms. The large lodge-room is 55 ft. by 20 ft.

Obituary.—We record with much regret the death of Mr. C. Clinton Hoey, which took place on Sunday last, in his fifty-fourth year, at his residence, South Hackney, after a long illness. Born near Dublin, he was intended by his parents for the architectural profession, and, with the view of attaining a good practical knowledge of construction, we believe he worked for some time at the joiner's bench, subsequently taking an appointment as Clerk of Works. A taste for literary pursuits led him to turn his attention to journalism, and he has been a valued contributor to the columns of the *Builder* for more than twenty years. We believe that for the last twelve years he has edited a professional journal published in Dublin, and that during the last few years he contributed articles on technical subjects to the *Evening Standard* and some local (Hackney) journals. He leaves a widow and one son to mourn his loss. He was hard-working, conscientious, and self-denying, and in him we have lost a contributor for whom we had great regard.

Gas as an Economiser of Coal.—The exhaustion of the coal supplies of the country has been the subject of discussion in some of the Manchester papers between Mr. Ellis Lever, of Bowden, Cheshire, and Mr. Thomas Newbigging, the President-elect of the Gas Institute. Mr. Lever laments the waste in getting the coal and in using it when got, whilst Mr. Newbigging is of opinion that the coal supply is not so close upon the point of exhaustion as many people suppose. Replying to this letter, Mr. Lever offers a sum of 20*l.* for the best paper or essay to be read at the forthcoming meeting of the Gas Institute in Manchester, on the subject of "Economising coal by the more extended or general use of gas for domestic and manufacturing purposes, and for the generation of steam." Mr. Newbigging, in his official capacity, has accepted this offer. *Gas and Water* says:—"The subject is one of vast importance, and must be carefully considered, and we question whether a premium of 20*l.* is a sufficient inducement to the preparation of an exhaustive paper. We shall, therefore, gladly supplement that sum by 30*l.*; or, alternately, we shall give a premium of 50*l.* for the best paper, and the 20*l.* offered by Mr. Lever might then be awarded as a second prize."

Measuring the Thickness of Boiler Plates.—An ingenious process for determining the thickness of iron plates in boilers, or places where they cannot otherwise be measured without cutting them, has been invented by M. Lebasteur. He spreads upon the plate the thickness of which he desires to find, and also upon a piece of sheet-iron of known thickness, a layer of tallow about 0·01 in. thick. He then applies to each, for the same length of time, a small object, such as a surgeon's cauterising instrument, heated as nearly as possihle to a constant temperature. The tallow melts, and as in the thicker plate the heat of the cautery is conducted away more rapidly, while in the thin plate the heat is less freely conducted away, and the tallow is consequently melted over a large area, the diameters of the circles of bare metal around the heated point, bounded after cooling by a little ridge of tallow, will be to each other inversely as the thickness of the plates. The process is stated to have given, in the inventor's hands, results of great accuracy. —*Iron.*

Social Science Association.—The Council of the Social Science Association have, after due notice given, unanimously passed a resolution to the effect that, in prospect of a general election in the month of November, it is undesirable to hold a Congress during the present year. They have, therefore, been reluctantly compelled to decline the invitation received from the City of Bath to meet there in the forthcoming autumn, but they have expressed a hope that the invitation from the city may be renewed for the year 1886. It has, however, been referred to the Executive Committee for consideration and report whether a Conference of a more limited nature should not be organised in London on some special subject or subjects to which, in view of the opening of a new Parliament, it may be considered desirable to call attention.

Becker's Cooking Apparatus.—Mr. Becker writes to say that the consumption of coals per day for cooking for 500 persons by his apparatus is ¼ cwt., not 1½ cwt., as stated in our notice of the apparatus. We gave the statistics as furnished to us and noted down at the time.

COMPETITIONS, CONTRACTS, & PUBLIC APPOINTMENTS.

Epitome of Advertisements in this Number.

COMPETITIONS.

Nature of Work.	By whom required.	Premium.	Designs to be delivered.	Page.
New School Buildings	Cheltenham Gram. Sch.	100*l.* and 50*l.*	July 1st	ii.

CONTRACTS.

Nature of Work, or Materials.	By whom required.	Architect, Surveyor, or Engineer.	Tenders to be delivered.	Page.
New Police-Station	The Receiver, Metro. Police District	*Official*	April 27th	ii.
Retort House, &c.	Crays Gas Co.	F. Morris	April 28th	xix.
Water Vans for Road Watering	West Ham Local Brd.	Lewis Angell	do.	xix.
Reparations, St. Oswald's Church, Filey		W. S. Barber	April 29th	ii.
Furniture	Guardians of St. Pancras	*Official*	April 30th	ii.
Foundations for Station, &c., Bldngs, Bradford Cleaning and Painting Ironwork, &c., for Bridges Painting and Repairs	Midland Railway Co.	A. A. Langley	May 1st	xix.
Band-Stand	Bournemouth Com.	R. W. P. Birch	May 2nd	ii.
Broken Granite	Ramsey Local Board	*Official*	May 4th	ii.
Roadmaking, &c.	United Land Co., Lim.	do.	do.	ii.
Enlargement of Post-Office, Landport	Com. of H.M. Works	do.	May 5th	ii.
Quebec Yellow Pine	Great Western Ry. Co.	do.	do.	ii.
New Passenger Station, Pilning	do.	do.	do.	xix.
Boys' School, &c.	Aberdare School Board	do.	May 6th	ii.
Cast-Iron Pipes, &c.	Swansea Town Council	B. H. Wyrill	do.	ii.
Granite, Flints, &c.	Chiswick Local Board	—Ramsden	do.	ii.
Hoardings, &c.	Met. Board of Works	*Official*	May 7th	ii.
Granite	Grdns. Dartford Union	do.	May 8th	ii.
New Post-Office, Guildford	Com. of H.M. Works	do.	May 13th	ii.
New Municipal Offices, Police-courts, &c.	Burnley Corporation	H. Holtom	do.	xix.
Waterworks	Sherborne Local Board	J. Mansergh	May 18th	ii.
Wesleyan Chapel, Schools, &c., Bournemouth	The Trustees	R. Curwen	Not stated	xix.
Erection of Six Small Houses	Proprietors, Belmont Estate, Sutton	E. S. & H. Boosey	do.	ii.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in.	Page.
County Surveyor	West Suffolk	120*l.*, &c.	May 16th	xvi.

TENDERS.

For constructing the High-street Arcade, Cardiff. Messrs. T. Waring & Sons, St. John's-square, and J. P. Jones, 27, Park-street, Cardiff, joint-architects:—

	Without Spire.	With Spire.
H. Forse, Bristol	£12,490	£12,750
R. Price, Cardiff	11,300	11,500
A. Lewis, Cardiff	10,860	11,000
Jones Bros., Cardiff	10,800	11,030
Howell & Sons, Bristol	10,580	10,779
D. Davies, Cardiff	10,350	10,570
D. J. Davies, Cardiff	10,350	10,540
F. S. Lock, Cardiff	10,188	10,379
S. Shepton & Son, Cardiff	10,175	10,367
C. Shepherd & Son, Cardiff (accepted)	9,994	10,194

For erecting a Congregational Church in London-road, West Croydon. Mr. W. D. Church, architect, 12, Southplace, Finsbury. Quantities by Mr. C. Stanger, surveyor, 21, Finsbury-pavement:—

		Alternate Estimates.	
		A*	B†
Colls & Sons	£12,700	£100	£50
Glasscock	12,700	107	100
Higgs & Hill	12,140	120	220
Dove Bros.	11,875	85	50
Jerrard	11,093	130	90
Hobbs	11,090	115	120
Woodward	10,937	120	60
Bowyer	10,879	102	50
Staines & Son	10,666	116	100
Shurmur	10,584	100	200
Goddard & Son	10,480	108	25
Jas. Smith & Son	10,445	100	20
Perry & Co.	10,430	166	175
Pelham	10,293	59	66
Kilby & Gayford	10,234	88	48
Holloway	9,973	88	35

* If boarding and felt omitted to roof.
† If yellow deal instead of pitch pine.

For alterations and additions to house in Stroud Green-road. Mr. W. Smith, architect:—

Durnford & Langham	£298	0	0
Mattock Bros.	297	0	0
J. O. Richardson	294	0	0
Larke	280	0	0
Hewitt	271	0	0
Stevens Bros.	209	0	0

For alterations and additions to 100 and 101, Archway-road. Mr. W. Smith, architect:—

Wilson	£557	10	0
J. O. Richardson	510	0	0
Meredith	505	10	0
Hewitt	505	10	0
Anley	497	0	0
Goodman	495	0	0
Mattock Bros.	466	0	0
Larke & Son	459	0	0
Durnford & Langham	428	0	0
Walker	424	0	0
Stevens Bros.	396	0	0
Hurst	380	0	0

For alterations and additions to St. Matthias Church, Caledonian-road. Mr. W. Smith, architect. Quantities supplied by Mr. E. J. Pain:—

Greenwood	£3,780	0	0
Lawrence & Son	3,698	0	0
Dove Bros.	3,360	0	0
Stevens Bros.	3,293	0	0
Grover	3,252	0	0
Durnford & Langham	3,246	0	0
Kelly & Gayford	3,234	0	0
Mattock Bros.	3,093	0	0
Nightingale	3,071	0	0
Larke	3,052	0	0
Chessum	3,027	0	0
J. O. Richardson	2,987	0	0
Morter	2,969	0	0
Woodward	2,900	0	0

For new stabling, &c., at Broad-street, Ratcliff. Mr. W. Dunch, architect:—

J. S. Curtis	£1,416	0	0
W. Shurmur	1,377	0	0
F. & F. J. Wood	1,374	0	0
M. A. Palmer	1,345	0	0
J. Woodward	1,320	0	0
J. A. Taylor	1,209	0	0

For the erection of head quarters and drill hall, Adam and Eve Yard, High-street, Kensington, for the 4th Middlesex (West London) Rifle Volunteers. Mr. Alfred J. Hopkins, architect, 10, Berners-street. Quantities supplied:—

Miller & Brown	£3,450	0	0
Bartlett & Hawkins	2,900	0	0
Hayward Bros. (Limited)	2,880	0	0
Ashwell	2,777	0	0
Mattock Bros.	2,693	0	0
Lascelles & Co.	2,686	0	0
Patman & Fotheringham	2,645	0	0
Chappell (accepted)	2,429	0	0

[Architect's approximate estimate, 2,500*l.*]

For forming roads and sewers in laying out Chatto's Estate, Clapham Common. Mr. W. Newton Dunn, surveyor, 1 and 2, Bucklersbury:—

Trehearne & Co., Battersea	£3,190	0	0
H. Knight, Gravesend	3,000	0	0
Prouse & Lee, Liverpool-street	2,740	0	0
Cooke & Co., Battersea	2,400	0	0
J. Clarke, Thornton Heath	2,215	0	0
A. Oliver, Harlesden	2,200	0	0
H. Lake, Croydon	2,160	0	0
A. Blake, Sydenham	2,141	0	0
H. Potter, Clapton	2,095	0	0
Roland Bros., Bletchley	2,069	0	0
R. Mayo, Brixton	2,035	0	0
A. T. Catley, Lloyd-square	1,970	0	0
G. Bell, Tottenham	1,968	0	0
Beadle Bros., Erith	1,936	0	0
W. Williams, Wimbledon	1,900	0	0
J. Hare, Clapham	1,880	0	0
W. Nicholls, Wood-green	1,815	0	0
G. & R. Neal, Wandsworth-common	1,787	0	0
J. Saunders, Fulham	1,753	0	0
C. Killingback, Camden Town	1,715	0	0
Bath & Blackmore, Clapham	1,660	0	0
G. Butler, Camberwell	1,600	0	0
Peill & Son, Bromley (accepted)	1,480	0	0

For alterations to the Nottingham Castle public-house, Nine Elms. Mr. W. T. Farthing, architect:—

W. Royal	£760	0	0
Birch & Co.	647	0	0
W. Shurmur	585	0	0
Gill	547	0	0
Millson	519	0	0
T. Beale	492	0	0
Spencer & Co.	475	0	0

For enlargement of schools, Dempsey-street, for the London School Board. Mr. T. J. Bailey, architect:—

F. & F. J. Woods	£1,802	0	0
J. Goodman	1,773	0	0
H. L. Holloway	1,700	0	0
J. Reading	1,650	0	0
M. A. Palmer & Co.	1,618	0	0
J. Outhwaite & Son	1,612	0	0
E. C. Howell & Son	1,594	0	0
G. S. Pritchard	1,593	0	0
W. Shurmur	1,593	0	0
Perry & Co.	1,590	0	0
Lathey Bros.	1,589	0	0
Kirk & Randall	1,580	0	0
J. R. Hunt	1,575	0	0
Holloway Bros.	1,561	0	0
J. Grover & Son	1,535	0	0
Atherton & Latta	1,495	0	0
S. J. Jerrard	1,489	0	0
Stimpson & Co.	1,470	0	0
C. Cox	1,447	0	0

For removing and re-erecting iron building at Halford-road, for the London School Board. Mr. T. J. Bailey, architect:—

S. J. Jerrard	£250	0	0
Atherton & Latta	245	0	0
W. Shurmur	227	0	0
W. Johnson	195	0	0
W. Oldrey	170	0	0

For removing and re-erecting iron buildings at Langford-road, for the London School Board. Mr. T. J. Bailey, architect:—

G. S. Pritchard & Son	£415	0	0
W. Shurmur	388	0	0
W. Oldrey	335	0	0
W. Johnson	309	0	0

For new residence, London-road, Luton, for Mr. F. J. Brown. Mr. J. R. Brown, architect, Luton:—

T. Neville	£1,345	0	0
Smart Bros.	1,309	15	0
F. White	1,300	0	0
D. Dunham	1,290	0	0
Cox Bros.	1,270	0	0
Slough Bros.	1,227	0	0
A. H. Lissaman	1,225	0	0
W. Dunham	1,216	0	0
Rance Bros. (accepted)	1,181	10	0

For alterations and additions to Lea Villa, New Bradford road, Luton, for Mr. W. Lye. Mr. J. R. Brown, architect, Luton:—

D. Dunham, Luton	£420	0	0
Smart Bros., Luton	413	0	0
T. Neville, Luton (accepted)	375	0	0

For villa residence, Cardiff-road, Luton, for Mr. G. M. Johnson. Mr. J. R. Brown, architect, Luton:—

Smart Bros., Luton (accepted)	£1,046	17	0
D. Dunham, Luton	1,009	0	0
T. Neville, Luton	970	0	0

For the erection of a dwelling-house at Bishopstoke, for Mr. H. Wheeler. Mr. A. W. Galbraith, C.E., architect. Quantities by Mr. R. S. Wardle, 4, Middle Temple-lane, London. The whole of the bricks for the job to be delivered on to the site by the building owner, free of cost:—

Franklin, Southampton	£1,825	0	0
Bull, Son, & Co., Southampton	1,684	0	0
Sanders, Southampton	1,678	0	0
Sealey Bros. & Bascomb, Winchester	1,560	0	0
White, Bishops Waltham	1,390	0	0

For the erection and completion of St. Emmanuel's Church, Harrow-road. Quantities by Mr. William Thornicraft:—

Dixon	£5,890	0	0
Raymond	5,750	0	0
Longmire & Burge	5,300	0	0
Axford	5,293	0	0
Colls & Sons	5,218	0	0
J. Dorey	5,027	0	0
Wm. Oldrey	4,990	0	0
Parmenter	4,958	0	0
Goddard & Sons	4,916	0	0
Dove Bros.	4,920	0	0
Simpsson & Son	4,876	0	0
Nightingale	4,821	0	0

For rebuilding the King's Head Public-house, and for four houses and shops in Church-street and Church-street North, West Ham, for Messrs. Charrington & Co. Mr. John Hudson, architect, 80, Leman-street. Quantities by Mr. C. Stanger:—

F. & F. J. Wood, Mile End	£7,446	0	0
Outhwaite & Son, Upper East Smithfield	6,777	0	0
T. Little, Whitechapel	6,522	0	0
J. & H. Cocks, Mile End	6,145	0	0
T. Norton & Son, Stratford	6,068	0	0
J. Bentley, Waltham Abbey, Essex*	5,923	0	0

* Accepted.

For Compton Gifford Drainage Works. Contract No. 1. Mr. Edward Appleton, engineer:—

Thomas & Sons, Dartmouth	£9,500	0	0
Hawkins, Dawlish	9,450	0	0
Goad, Plymouth	8,580	0	0
Norris, Bolton	8,560	0	0
Shaddock, Plymouth	7,736	0	0
Finch & Son, Plymouth	7,194	0	0
Mackay, Hereford	7,180	0	0
Harley, Plymouth	7,133	0	0
Pethick, Plymouth	5,994	0	0
Shillabear, Plymouth	5,889	0	0
Hill, Beckenham	5,694	0	0

[Engineer's estimate, 6,286*l.*]

For the supply and erection of a boiler 7 ft. diameter and 30 ft. long, with two internal flues, and all necessary mountings and fittings in connexion therewith, for the Sewage Works at Leicester. Specification and conditions by Mr. J. Gordon, C.E., Borough Surveyor:—

	Of boiler plates.			Of steel.	
Jos. Adamson & Co., Hyde	£430	0		£425	0
W. F. Coleman, Loughborough	365	0		370	0
Death & Ellwood, Leicester	4 0	0		383	0
W. J. Galloway, Manchester	385	0		365	0
Gimson & Co., Leicester (accepted)	315	0		315	0

For the supply and erection of two boilers 7 ft. diameter and 30 ft. long, with two internal flues to each boiler, and all necessary mountings and fittings in connexion therewith, for the Borough Lunatic Asylum, Leicester. Specification and condition by Mr. J. Gordon, C.E., Borough Surveyor:—

	Of boiler plates.			Of steel.	
W. J. Galloway & Sons, Manchester	£775	0		£795	0
J. Adamson & Co., Hyde, near Manchester	762	0		752	0
Death & Ellwood, Leicester	757	10		757	10
W. F. Coleman, Loughborough	620	0		630	0
Gimson & Co., Leicester (accepted)	615	0		615	0

For alterations, reseating, &c., at Commercial-road Baptist Chapel. Mr. H. T. A. Chidgey, surveyor, 1, Vine-street, Minories. Quantities supplied:—

		New gallery front.		New coping.	
Calnan	£1,273	0	£105	0	£70	0
Holland	1,233	0	85	0	20	0
Wood	1,180	0	65	0	15	0
Falkner	1,175	0	82	0	18	0
Nixon	1,174	0	90	0	27	15
Hewlitt (withdrawn)	987	0	54	0	12	0

For alterations and additions to Shord Hill, Kenley, near Caterham, Surrey, the residence of Mr. B. Blenkinsop. Mr. Robert Willey, architect, 66, Ludgate-hill:—

Clarke & Bracey, London	£1,040	0	0
J. Woodward, London	1,020	0	0
D. Waller, Croydon	935	0	0
Smith & Son, South Norwood*	693	0	0

* Accepted.

Accepted for the erection of a house in the Hamilton-road, Ealing, for Mr. A. H. Johnson. Mr. Robert Willey, architect:—

T. Nye, Ealing	£2,650	0	0

For new Board schools and master's house at Chelsfield, Kent, for the Chelsfield School Board. Mr. St. Pierre Harris, architect. Quantities by Mr. C. Stanger, 21, Finsbury-pavement:—

J. Taylor & Son, Bromley, Kent	£2,607	0	0
F. Wood, Chislehurst West, Kent	2,573	0	0
A. Sykes, Catford	2,460	0	0
W. A. Grubb, Bromley, Kent	2,417	0	0
Neave & Neave, St. John's Wood, London	2,412	0	0
W. Wright, Chelsfield	2,396	15	0
J. C. Arnaud & Son, Bromley, Kent	2,396	0	0
W. Clark, Bromley, Kent	2,379	15	3
C. H. Denne & Son, Queen-street, Dover	2,350	0	0
J. Bingham, Headcorn, Kent	2,347	0	0
W. & F. Croaker, Great Dover-st., Borough	2,335	0	0
G. H. Lay, Bromley, Kent	2,335	0	0
Diss	2,330	0	0
Lees & Hooker, Blackfriars-road	2,298	0	0
Staines & Son, Great Eastern-street	2,288	0	0
Hunter & Bryant, Warlingham Station	2,281	0	0
T. Crossley, Bromley, Kent	2,273	0	0
G. Parker, Peckham	2,180	0	0
Brand, Eltham	2,143	0	0
W. J. Adcock, Ladywell, Dover	2,128	0	0
F. Warr, Croydon	2,122	0	0
H. Bolding, Bromley, Kent*	2,044	0	0

* Accepted subject to the approval of Education Department.

For the completion of two houses, South Hill Park Estate, Bromley, Kent. Messrs. Baxter, Payne, & Lepper, surveyors. Mr. St. Pierre Harris, architect:—

	No. 1.			No. 2.	
T. Crossley	£776	0		£1,060	0
W. Cooper	790	0		950	0
W. Clark (accepted)	575	0		796	0

For constructing additional lavatories, bath-rooms, and relief offices at the Workhouse, Tanner-street, Bermondsey, for the Guardians of the Poor of the St. Olave's Union. Messrs. H. Saxon Snell & Son, architects, London:—

W. Bamford	£2,209	0	0
Wall Bros.	2,118	0	0
C. Batchelder	1,997	0	0
A. White & Co.	1,989	0	0
J. Bullers	1,978	0	0
Foster & Dicksee	1,885	0	0
Harris & Wardrop	1,833	0	0
S. Chafen	1,817	0	0
G. Roberts	1,802	0	0
H. L. Holloway	1,700	0	0
W. T. Brockwell & Sons	1,539	0	0

For new oil mill, Limehouse, for Hirsch's Copenhagen Oil Mills, Limited. Messrs. Wilson, Son, & Aldwinckle, architects, 2, East India Avenue, Leadenhall-street. Quantities supplied:—

	Estimate A.	Estimate B.	Extra for glazed bricks.
Hall, Beddall, & Co.	£8,284	£13,644	£560
Perry & Co.	8,000	13,090	555
Richens & Mount	7,190	12,580	520
Bywaters	6,829	12,353	540
Mowlem & Co.	6,980	12,030	529
Ashby & Horner	6,673	11,790	590
Kirk & Randall	6,695	11,747	496
C. Cox	6,600	11,378	500
Brass & Son	6,363	11,273	544
Peto Bros.	6,452	11,155	398

For the erection of five houses, Cobden-road, Norwood Junction. Messrs. Cane, Wotton, & Co., surveyors, Rye-lane, Peckham, S.E.:—

Wm. Dean, 3, South-place, Peckham	£1,300	0	0!
Saunders & Co., 266, Frieris-road, East Dulwich	1,235	0	0
T. Barton & Son, Whitehorse-road	1,206	10	0
F. Warr & Co., Neville-road, Croydon	1,177	0	0
Hubble & Trott, New Cross	1,175	0	0
Couzins & Co., 66, Boyson-road, Camberwell	1,155	0	0
J. Holden, Harringay-road, Tottenham	1,115	0	0
W. Holt, Limes Estate, Croydon	1,100	0	0
Lee & Gleves, Thurlston-rd., Croydon	1,025	0	0
John Moody, Woodside-green, Croydon (accepted)	1,050	0	0
Horne, Fenn, & Co., 35, Lugard-road, Peckham	1,003	0	0
G. A. Taylor, Nutfield, Surrey	649	0	0!

For class-room, alteration, and extension to the Buckland and Tower Hamlets Wesleyan Sunday Schools, Dover. Quantities supplied. Messrs. Cresswell & Newman, architects, Dover:—

J. Parsons, Dover	£1,217	10	10
Jos. Stiff, Dover	1,001	0	0
J. H. Bushell, Dover	901	8	2
H. Stiff, Dover	847	10	0

[Architect's estimate, 850*l.*]

For erecting Wesleyan Chapel and School at Team Colliery, Gateshead. Mr. William Thompson, architect and surveyor, Chester-le-Street:—

Thos. Robson, Low Fell, Gateshead	£765	0	0!
John Jennings, Chester-le-Street	380	0	0
John Reid, Low Fell, Gateshead	377	10	0
Wakefield & Robson, Gateshead	330	10	0
Watson & Robson, Wreckenton and Washington (accepted)	311	0	0!

For the erection of a parsonage house at Tannington, Framlington, for the Rev. W. W. Tyler. Mr. W. T. Lowdell, architect, 9, Great James-street, W.C. Quantities by Messrs. Francis & Robinson, 1, Furnival's Inn:—

	House.	Stables.	Total.
Allen & Sons, London	£1,910	£190	£2,100
Bardell Bros., King's Lynn	1,824	173	1,997
Bell & Son, Saffron Walden	1,709	170	1,879
W. & H. Castle, London	1,668	179	1,847
Grimwood & Son, Harleston	1,610	140	1,750
Thoday & Son, Cambridge	1,588	160	1,748

Accepted for the Keith Institute Buildings, Fife Keith, N.B. Mr. F. D. Robertson, architect, Fife Keith:—
Thomas Stewart, Keith (mason's work).
G. & R. Cameron, Keith (carpenter's work).
J. Taylor, Fife Keith (slater's work).
J. Paul, Huntly (plasterer's work).
R. K. Rathie, Keith (plumber's work).
Morrison McConnachie, Keith (painter's work).
[Total amount of contracts, exclusive of clock tower, slightly over 2,000*l.*]

For house, farm buildings, and lodge at Scalby Bridge, Scarborough, for Mr. Edwin Brough. Messrs. W. Sugden & Son, architects, Leek:—

T. S. Bromage James Bland Septimus Bland	£3,145 0 0

For altering shop-front and fittings to shop adjoining the Rock House Hotel, Battersea Park-road, for Mr. E. Purchase. Mr. H. I. Newton, architect, 17, Queen Anne's Gate, Westminster:—

Beales	£236	0	0
Cowdry & Eaton	196	0	0
Walker	186	15	0

For the erection of warehouse at Under-the-Cliffe, Maidstone, for Mr. George Wakefield. Messrs. Ruck, Son, & Smith, architects, Maidstone. Quantities supplied:—

Thos. Elmore, Maidstone	£680	0	0
J. H. Bridge, Maidstone	670	0	0
E. Vaughan, Maidstone	657	0	0
Cox Bros., Maidstone	625	0	0
George Gray, Maidstone	625	0	0
Wallis & Clements, Maidstone	615	0	0
R. Avard, Maidstone (accepted)	610	0	0

For alterations and additions to business premises, West Borough, Maidstone, for Messrs. A. F. Style & Co. Messrs. Ruck, Son, & Smith, architects:—

Thos. Elmore, Maidstone	£460	0	0
Wallis & Clements, Maidstone	456	0	0
Cox Bros., Maidstone	447	0	0
E. Vaughan, Maidstone (accepted)	437	0	0

For entrance lodge at Kent-street, Mereworth, for the Right. Hon. Viscount Falmouth, Mereworth Castle, Kent. Messrs. Ruck, Son, & Smith, architects, Maidstone. Quantities supplied:—

William Wells, Wateringbury	£531	0	0
Wallis & Clements, Maidstone*	442	10	0

* Accepted.

For reconstruction of wharfs on the St. Bartholomew's Hospital Estate at Chatham Inks, Kent, for Messrs. W. T. Ashenden, Woodhams & Levy, and John Dunstall. Messrs. Ruck, Son, & Smith, architects. Quantities supplied:

	No. 1. £. s.	No. 2. £. s.	No. 3. £. s.	Total. £. s.
Callund & Son, Rochester	490 0	340 0	198 0	1,028 0
Ball & Gammon, Strood	425 0	282 0	180 0	887 0
Hocking & Co., Strood	395 0	276 13	166 9	838 2
Jas. Thompson, Chatham	387 0	270 15	156 8	814 3
Jas. Farrow, Maidstone*	377 12	266 9	151 10	795 11

* Accepted.

For reconstruction of Farningham Lees (Swing) Foot-bridge, Dartford, Kent, for the Justices of the county of Kent. Mr. Frederick W. Ruck, County Surveyor, Maidstone. Quantities by Messrs. Ruck, Son, & Smith, architects:—

Ball & Gammon, Strood	£575	0	0
James Clements, Maidstone	519	0	0
James Farrow, Maidstone	490	10	0
Hocking & Co., Strood (accepted)	485	7	0

For additions to infirmary wards and new west boundary wall, railing, and gates, at the Great Yarmouth Workhouse for the Guardians of the Poor of the parish of Great Yarmouth. Messrs. Bottle & Olley, architects:—

Infirmary Wards.

Rand & Cooper	£2,288	0	0
J. Leggett	2,281	0	0
J. S. Cooper	2,188	0	0
J. F. Bray	2,150	0	0
E. Howes	2,150	0	0
Cork & Beech (accepted)	2,094	10	0

Wall.

J. F. Bray	£449	0	0
G. Flaxman	409	10	0
J. Leggett	400	0	0
E. Howes (accepted)	398	0	0
Cork & Beech	395	0	0

For the erection of new malting at Ware, Hertford, for Messrs. H. A. & D. Taylor. Messrs. Davison, Inskipp, & Mackenzie, architects, 62, Leadenhall-street. Quantities by Messrs. R. L. Curtis & Sons:—

F. Hitch	£7,593	0	0
T. Hunt	7,488	0	0
J. Morter	7,243	0	0
Brown, Son, & Blomfield	6,60)	0	0
Thos. Wontner Smith & Son	6,437	0	0
G. Grimwood & Sons (accepted)	6,420	0	0

For the extension of Abbey-road Schools, West Ham, for the West Ham School Board. Mr. J. T. Newman, architect, 2, Fen-court, Fenchurch-street. Quantities by Messrs. Curtis & Sons:—

Catley	£4,699	0	0
Gregar	4,420	0	0
Hoskings	4,356	0	0
Hearle & Son	4,293	0	0
Reed	4,197	0	0
Morter (accepted)	4,180	0	0

For the restoration of premises, 376, Mile End-road, for Mr. S. Saxby. Mr. J. B. Wall, architect:—

F. Head, South Hackney (accepted)	£229	10	0

For the erection of three houses and shops on site of 54, Essex-road, Islington, for Mr. A. Clifford. Mr. J. B. Wall, architect. No quantities:—

Bridgman	£3,495	0	0
Sabey & Son	3,490	0	0
Higgs	3,479	0	0
Kirk	3,477	0	0
M. Redman	3,079	0	0
Jackson & Todd	3,079	0	0
S. Salt	3,045	0	0
H. L. Holloway (amended)	2,975	0	0

For alterations and repairs to the Rising Sun public-house, Anerley-road, for Mr. C. Davey. Mr. J. B. Wall, architect:—

H. T. Adams	£179	0	0
John Flynn	163	0	0
Barton & Son, Croydon (accepted)	132	0	0

For erection of billiard-room at the Deptford Conservative Club, New-cross, for the Deptford Conservative Club Company (Limited). Mr. J. B. Wall, architect:—

H. L. Holloway, New-cross	£55)	0	0

For the erection of Vicarage house, stabling, &c., at Shedfield, Hants. Mr. E. H. Lingen Barker, architect, Hereford:—

Groom, Rowland, & Co., London	£2,390	0	0
Knight, Wickham	2,320	0	0
Davy, Wickham	2,314	0	0
Light Bros., Portsmouth	2,029	4	2
Claridge, Banbury	2,007	0	0
Goddard & Sons, Farnham	1,963	0	0
Sanders, Southampton	1,939	0	0
Bull & Sons, Southampton	1,880	0	0
Crook, Southampton	1,878	10	0
Green, Meonstoke	1,864	0	0
Corke, Southsea	1,850	0	0
Conway, Wickham	1,832	17	6
Franklin, Southampton	1,811	10	5
Stallard, Havant	1,785	0	0
Tompsett & Kingham, Farnham*	1,782	0	0

* Accepted.

For the erection of warehouse, for Messrs. Dandridge, Church-street, Deptford. Mr. J. J. Downs, architect:—

Jerrard	£2,800	0	0
Redman	2,637	0	0
Lordon & Son	2,079	0	0
H. L. Holloway (accepted)	1,967	0	0

For alterations to the Northumberland Club, 40, West Strand. Messrs. Hooker & Hemings, architects. Quantities by Messrs. J. & A. E. Bull:—

Longmire & Burge	£1,670	0	0
W. J. Hack	1,581	0	0
Scrivener & Co.	1,569	0	0
J. M. Macey & Son (accepted)	1,513	0	0

For labour only in the erection of two shops and cottages, Crewborough, Sussex, for Mr. Thomas Peerless. Mr. C. Edwards, surveyor:—

Bricklayer's, Slater's, and Plasterer's Work.

O. Paine	£105	0	0
J. Mackellew	92	0	0
B. Wickens	90	18	6
J. Goldsmith (accepted)	85	0	0

Carpenter's, Joiner's, Plumber's, Glazier's, and Painter's Work.

G. Beard	£174	0	0
T. Midmore	168	15	0
O. Paine	156	0	0
C. Weston	149	3	0
J. Goldsmith (accepted)	120	0	0

For sundry alterations and additions, Belvoir Cottage, Grange-hill, Chigwell. Mr. A. Ashbridge, architect. No quantities:—

Read	£395	0	0
M. Calnan & Co.	371	0	0
Moore	200	0	0

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B. C. B.—W. C. C.—C. L. Paris.—F. A. D. (not of any interest to us).—J. W. & Sons.—C. S. (write to the Secretary of the Association).—W. W. L.—H. A.—"An Amateur" (letters should be authenticated with name and address).—J. T. T.—G. R. W. (shall have attention).—A. W. C. (not inserted because amount not sent).—W. T. (under our mark).

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System of Water Supply for Country Mansions, by means of Rams, &c.

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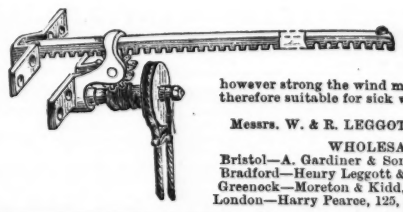

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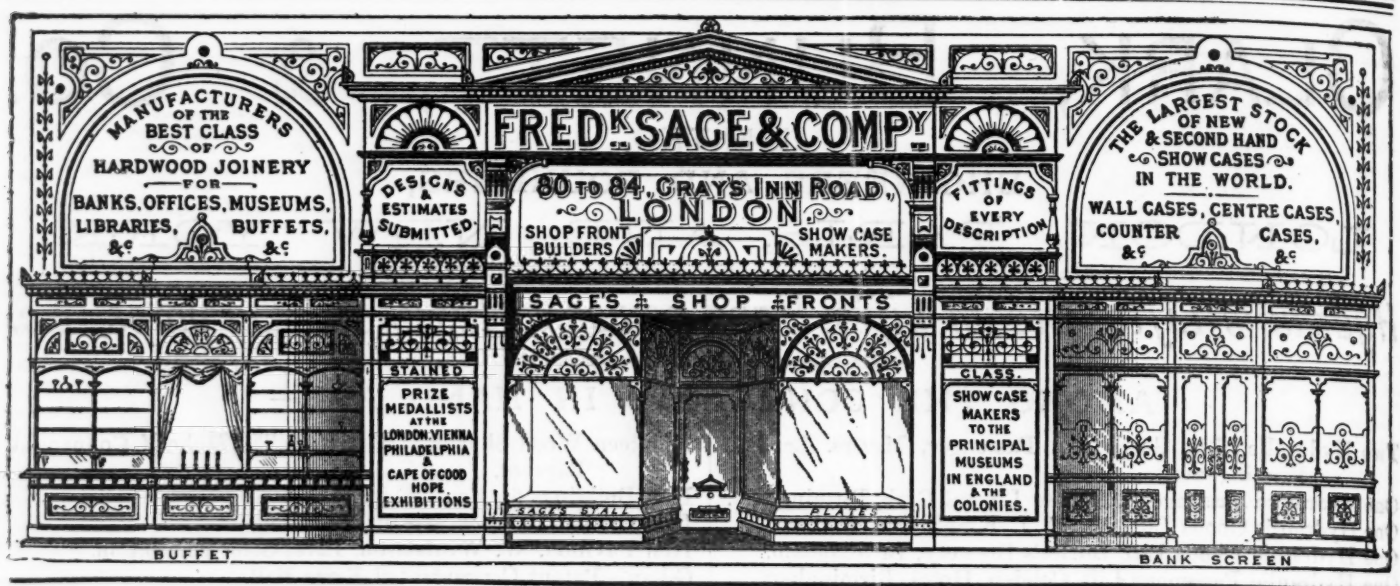
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